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FISHERY MARKET NEWS

A REVIEW OF CONDITIONS AND TRENDS OF THE COMMERCIAL FISHERIES

PREPARED IN THE DIVISION OF FISHERY INDUSTRIES



R. H. Fiedler, Editor

A. W. Anderson, Associate Editor
R. W. Harrison - - - - TECHNOLOGY
E. A. Power - - - - STATISTICS

Don Bloch, Assistant Editor
A. W. Anderson - - MARKET NEWS
Ralph Russell - - - - MARKETING
Don Bloch - - - - CONSUMERS

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CONTENTS

	Page
SEED OYSTER PRODUCTION IN SOUTH CAROLINA, BY ROBERT O. SMITH	1
LOSS IN WEIGHT AND MORTALITY OF SEA MUSSELS, BY V. L. LOOSANOFF AND JAMES B. ENGLE	2
COLOMBIAN AIRLINES CARRY FISH TO BOGOTA, BY CLARENCE R. LUCAS	6
PRODUCTION OF FISHERY PRODUCTS IN ALA., LA., MISS., & TEX., 1942, BY C. E. & L. D. PETERSON ...	7
Trawling and the stocks of fish	11
U. S. wartime food situation	12
Fishing vessels returned by Navy	13
Fishermen recruited by U. S. Employment Service	13
Federal nutrition coordinating agency transferred to FDA	14
Index of patents	15
Outlook for the <u>Alaska Herring Fishery in 1943</u>	15
Progress in technology	15
Industry posters announced	16
Organizations and Officials Concerned With Wildlife Protection: 1942	38
FEDERAL ORDERS, PURCHASES, AND REGULATIONS	
War Shipping Administration authorized to sell fishing vessels to former owners	12
Purchase of rubber boots	15
February purchases of fishery products by FDA total \$1,807,830	17
Fishery products in WPB material substitutes and supply list	17
Regulations governing the placing of fishing structures in Chesapeake Bay amended	17
Advance allotments of rationed foods provided by OPA order	18
Crab and shrimp meal exempt from price control	18
Occupational Certification Form 42-B to be revised	18
Fresh fish price ceilings predicted by OPA head	24
New canned fishery products permitted	29
Weekly reports on fish pack required by WFA	30
Point values for canned fish commodities reduced	31
Glass container supply may be greater	32
Draft deferment appeal procedure revised	38
Packers' trimmings for crab bait exempted from OPA price schedule	39
SECTIONAL MARKETING REVIEWS	
Fisheries of Alabama	19
Fisheries of Washington and Oregon	19
FRESH FISH TRADE	
1942 three ports landings 100 million pounds less than 1941	20
Three ports landings show increase over year ago	20
Catch by large otter trawlers during 1942 dropped 39 percent under 1941	21
New York salt-water receipts increase 36 percent in March	22
Chicago receipts in March 13 percent below last year	22
Record high prices reported for shrimp in Gulf area	23
Seattle receipts in February drop 34 percent	24
FROZEN FISH TRADE	
March 1 stocks of frozen fish 30 percent below previous month	24
February freezings of cod, haddock and rosefish fillets less than year ago	25
Boston cold-storage holdings drop to record low at end of March	25
New York cold-storage holdings continue to decline sharply	26
Large withdrawals decrease Chicago cold-storage holdings	26
Canadian cold-storage holdings drop 20 percent during March	27
Canadian freezings increase more than 50 percent in March	27
CANNED FISH TRADE	
California pack of tuna and mackerel above that of a year ago	28
California sardine oil and meal production above previous season	28
Pack of shrimp in Gulf States down 8 percent on March 27	29
Preliminary statement of canned oyster pack in 1942	29
FOREIGN FISHERY TRADE	
Certain Canadian fish shipments need no export permit	32
Canadian imports 14.5 percent of fillets quota	32
Control of exports from Canada	32
Shark liver oil production developing in Brazil	33
Shark liver oil industry in the Madras Presidency	34
Fisheries of Uruguay	37
Fisheries of the Bahamas	37
Fisheries of Mexico	38
STATISTICAL SUMMARY	
Wholesale and retail prices	39
Fishery trade indicators	40
Trends of fishery trade	Inside back cover

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SEED OYSTER PRODUCTION IN SOUTH CAROLINA

By Robert O. Smith*

In most oyster growing regions of the Atlantic and Gulf Coasts, obtaining a good set is one of the most serious problems facing the oystermen. Oyster shells used for cultch must be planted at the precise time when there is the greatest abundance of oyster larvae in the water, and the planting must be made on suitable bottom.

In South Carolina, on the other hand, the problem is one of too much setting rather than too little. Also, setting is almost entirely confined to the inter-tidal area, the set below low water mark being largely destroyed within a few weeks after attachment. The planting of shells on inter-tidal banks may be done at any convenient time from December through July with assurance that a heavy set will be obtained.

Before describing the actual shell planting operations, it is necessary to point out certain peculiarities of the area. First, the average range of tide is in excess of seven feet, so that the water level is constantly changing at a rate of about a quarter of an inch a minute. Second, there are very large areas of soft mud, thickly covered with marsh grass (*Spartina*), the surface of the marsh itself normally being under water at high tide. These marshes are intersected by an extensive network of small creeks and drains, the latter mostly dry at low water.

The planting area is the sloping mud bank along the creeks and drains, and for best results even this is limited to the space between low water mark and two and a half feet above low water mark. Legally, South Carolina state law defines the oyster growing area for leasing purposes, as from one foot below low water mark to high water mark. Since some banks are steep while others slope gently to the water, the official oyster growing area may be as little as ten feet wide or as much as several hundred feet wide. On this account, measurement of leases in acres is extremely difficult.

Because of the rapid rise and fall of tide and the strong currents, large quantities of organic mud are continuously swept into suspension, so that the water is usually rather turbid, the ordinary limit of visibility not exceeding four feet. There is, of course, heavy silting on the slack side of streams, rendering them unfit for oyster culture, as the shells or live oysters are completely covered over within the space of a few weeks.

State Conservation laws provide that up to a third of the oyster shells from canneries may be planted under the direction of the Board of Fisheries. The Board determines where, when, and in what quantities these shells shall be planted. Instances of canners planting more than the required quantity of shells are rare. In order that Oyster Inspectors may supervise the planting, it is generally carried out during the months of May and June.

Planting is done from oyster schooners and barges, on which the shells are generally loaded by machinery. To utilize the services of the Oyster Inspector to the best advantage, it is usual for a number of boats to plant a specific area simultaneously, so that motor towboats may frequently tow from four to eight loaded schooners or barges to the selected creek. As the banks and flats are partially uncovered, and therefore inaccessible at less than half tide, the planting is done on the last half of flood tide and the first half of ebb. The shells are shovelled overboard by the crew as the vessels move slowly over the planting area. Places which are too shallow to be reached by the larger vessels are planted from the oyster batteaus, which carry from 20 to 40 bushels. The method of planting necessarily results in some unavoidable loss of shells as the exact location of banks cannot be observed, and some of them may fall either into deep water or too high on the bank. Also it is difficult to spread them evenly, as most must be put over the sides rather than from the sterns of the vessels.

* Asst. Aquatic Biologist, Division of Fishery Biology.

Once started around the middle of May, planting continues steadily for two or three weeks and normally will be finished by the middle of June. The rate of planting is, of course, dependent on the distance from the cannery to the leases. The maximum distance does not exceed twenty miles. However, the average rate of towing is about four miles per hour, so that considerable time is spent en route.

It has not been found necessary to plant each creek every year. If the planting is fairly heavy, around 2,000 bushels per acre, very good results have been obtained by planting every third year. Both the planted shells and the preceding year's catch continue to provide a suitable surface for attachment of spat, for the regular drying period on low tide twice a day, totaling from two to six hours exposure to the air, is sufficient to prevent slime formation.

Setting begins near the end of May and continues through August. There is some setting as early as April and as late as November, but it is not of commercial importance. The June set is most valuable as it has the advantage of a long growing season, and will average two inches in length by the following December.

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LOSS IN WEIGHT AND MORTALITY OF SEA MUSSELS KEPT IN STORAGE AT DIFFERENT TEMPERATURES

By V. L. Loosanoff and James B. Engle*

Introduction.--Owing to the new and growing interest in the utilization of sea mussels as a wartime food supply, producers and processors are asking questions about the effects of transporting live mussels from bed to bed and from bed to canning plant. Processors wish to know the loss suffered by shell stock exposed to different temperatures in shipment. Growers must know at what temperatures mussels can be transplanted from one bed to another with the least injury and how long they may be kept out of water without suffering a heavy mortality. Accordingly, the following experiments were devised and conducted to provide such information. Since the completion of the experiments, several such inquiries received at the Milford laboratory have been satisfactorily answered.

In evaluating the results of these observations it should be remembered that only strong and healthy mussels were used in the experiments. Therefore, mortality began to occur somewhat later than could be expected in the regular commercial samples, where it would be impractical to examine each mussel separately to eliminate all weak or damaged individuals.

Methods.--Common edible mussels, *Mytilus edulis*, approximately 2½ years old and measuring from 2¼ to 3 inches in length, were used in the experiments. The mussels were collected from a shallow water bed which, nevertheless, was never exposed at low water stages. Thus they were not accustomed to exposure to air even for short periods of time. The mussels were carefully cleaned and separated from each other. All that appeared to be weak or damaged were discarded.

Each sample of mussels consisted of 100 individuals. This was separated into two groups, each consisting of 50 mussels, which were kept in wire mesh baskets. One group was used to determine the daily decrease in the weight of the mussels, and the second, for the determination of mortality. The first group, with the exception of being weighed once a day in its basket, was not disturbed in any other way. The animals of the second group were removed daily from the basket, their condition noted and the number of dead ascertained.

Samples of mussels were exposed to temperatures of 30.0, 40.0, 50.0, 60.0, and 70.0° F. They were kept either in the refrigerators adjusted to a required temperature, or as in the experiment conducted at 70.0° F., placed in a room where the temperature was maintained at approximately the same level. In addition to the above mentioned samples, one more group of mussels was kept outside during a severe cold spell when the air temperature was at times as low as 0.0° F. The results of the experiments are discussed below.

Observations and Results.--Data covering the six experiments follow:

Experiment 1. Exposure of mussels to severe freezing temperature.

The mussels were placed in an unheated wooden building where the air temperature at the beginning of the experiment was 2.0° F. (Table 1). Within a few minutes all the mussels

* Aquatic Biologist and Chief Oyster Culturist, respectively, Milford Biological Laboratory, Division of Fishery Biology.

were solidly frozen and remained in this state until the end of the fourth day. Little loss in weight was noted during that period. During the fifth day the air temperature rose to 48.0° F. Examination of the mussels made on the sixth day showed that all were thawed but dead.

This experiment indicated that mussels, if rapidly frozen, will suffer but little loss in weight. The freezing method may therefore be used to avoid loss in weight of mussels shipped as food to distant points. It also showed that shifting or transplanting of mussels should not be carried on when the air temperature is much below freezing, because if frozen, they will not recover.

Table 1 - Loss in Weight and Mortality of Mussels Exposed to Severe Freezing Temperatures

Exposure Days	Accumulated Loss in Weight Percent	Accumulated Mortality Percent	Temperature		Exposure Days	Accumulated Loss in Weight Percent	Accumulated Mortality Percent	Temperature	
			A. M.	P. M.				A. M.	P. M.
0	0		2	-	4	7.2	Frozen	24	32
1	6.0		0	20	5	8.4	do	26	48
2	6.5		15	26	6	32.2	All thawed and found dead		
3	6.9		15	27					

Experiment 2. Exposure of mussels to an air temperature of 30.0° F.

This experiment was conducted for a period of 30 days (Table 2). The most significant loss in weight occurred by the end of the first day. Such a loss was due to the fact that the animals, unaccustomed to being out of water, partly opened their shell valves; thus losing some of their shell fluid. From the end of the first and until the 15th day the loss in weight was comparatively slow. At the end of that period the loss constituted only 17.3 percent of the initial total weight. Toward the end of the experiment many weakened and were gaping. This resulted in a more rapid loss of the moisture from the bodies of the mussels. At the end of the experiment, the fleshy parts were almost dehydrated, and the loss in weight reached 43.2 percent of the total initial weight.

Table 2 - Loss in Weight and Mortality of Mussels Exposed to an Air Temperature of 30° F.

Exposure Days	Accumulated Loss in Weight Percent	Accumulated Mortality Percent	Exposure Days	Accumulated Loss in Weight Percent	Accumulated Mortality Percent
1	7.7	0	16	19.0	6
2	8.4	0	17	20.2	6
3	9.7	0	18	22.2	6
4	10.3	0	19	26.0	6
5	11.0	0	20	29.6	8
6	11.8	0	21	32.4	12
7	13.1	0	22	33.9	20
8	14.3	0	23	34.9	22
9	15.1	0	24	36.0	30
10	15.2	0	25	37.7	36
11	15.9	0	26	39.2	38
12	16.3	0	27	40.7	42
13	16.6	0	28	41.7	42
14	16.8	4	29	42.8	46
15	17.3	4	30	43.2	50

No mortality was observed during the first 13 days of the experiment (Table 2). The mussels were healthy in appearance and their shells were moist and tightly closed. Although the third week several died, the majority, nevertheless, remained during that time in a comparatively good condition. As the experiment progressed, they became noticeably weaker and the gaping of shells more frequent. Exactly 50 percent of the mussels were dead at the end of the experiment. The survivors, numbering 25, were placed in running sea water for observation on their recovery. However, the effect of the prolonged exposure was apparently too severe as only 3 were alive at the end of 10 days in sea water.

The results of this experiment indicate that mussels may withstand exposure to 30.0° F. for relatively long periods. They may be stored at this temperature for a period of approximately 2 weeks, without losing too much weight, or suffering a heavy mortality.

Experiment 3. Exposure of mussels to an air temperature of 40.0° F.

As in the previous experiment, the greatest daily loss in weight occurred during the first 24-hour period, when 12.1 percent of the total weight was lost (Table 3). Considerable, although a much smaller loss, was also suffered during the second day of exposure. At the end of a 2-day period, the total loss amounted to 18.5 percent of the initial weight of the sample. At the end of the experiment, which lasted 2 weeks, the loss in weight amounted to 47.5 percent.

Table 3 - Loss in Weight and Mortality of Mussels Exposed to an Air Temperature of 40°F.

Exposure	Accumulated Loss in Weight	Accumulated Mortality	Exposure	Accumulated Loss in Weight	Accumulated Mortality
Days	Percent	Percent	Days	Percent	Percent
1	12.1	0	12	35.4	4
2	18.5	0	13	36.9	8
3	21.1	0	14	37.9	20
4	23.7	0	15	39.4	28
5	25.5	0	16	41.3	36
6	26.4	0	17	42.8	52
7	27.3	0	18	43.8	64
8	28.9	2	19	45.0	84
9	29.7	2	20	46.1	88
10	31.3	2	21	47.5	94
11	33.2	2	22	All dead	100

No mortality occurred during the first week of exposure. The majority of the mussels kept their shells closed, although several gaping individuals were always found. These quickly closed their shells when touched or otherwise disturbed. The first dead mussel was recorded on the 8th day. Beginning with the 12th day, the mortality became more common. The last 3 of the sample died after 21 days of exposure.

Experiment 4. Exposure of mussels to an air temperature of 50.0° F.

The greatest loss in weight occurred during the first 24-hour period, when gaping individuals lost large quantities of shell liquid (Table 4). Considerable loss was also noted during the second day of exposure. From then on a small but steady loss of moisture continued until the end of the experiment. At the end of 2 weeks this loss amounted to 43.8 percent of the total initial weight.

Table 4 - Loss in Weight and Mortality of Mussels Exposed to an Air Temperature of 50°F.

Exposure	Accumulated Loss in Weight	Accumulated Mortality	Exposure	Accumulated Loss in Weight	Accumulated Mortality
Days	Percent	Percent	Days	Percent	Percent
1	15.8	0	8	31.1	17
2	21.4	0	9	33.0	30
3	23.8	0	10	35.2	30
4	26.1	0	11	38.1	45
5	27.5	0	12	39.8	61
6	28.7	0	13	42.2	83
7	29.7	2	14	43.8	90
			15	All dead	100

The first mussel of the sample died during the 7th day of exposure. After that gaping mussels were noticed more often but, as a rule, all of them, except those near death, closed their shells when touched. During the second week the mussels were dying in large numbers. The experiment was ended on the 15th day when the last five were found dead.

Experiment 5. Exposure of mussels to an air temperature of 60.0° F.

The mussels lost over 25 percent of their original weight during the first 48 hours of exposure. The loss of the first day alone was 16.4 percent. During the rest of the experimental time, the loss in weight continued but it proceeded at a comparatively slow rate (Table 5). On the 9th day of exposure, the loss represented 43.5 percent of the original weight of the sample. As the majority were dead and decomposing at that time, no attempts were made to determine the loss in weight that occurred after the 9th day.

Table 5 - Loss in Weight and Mortality of Mussels Exposed to an Air Temperature of 60°F.

Exposure	Accumulated Loss in Weight	Accumulated Mortality	Exposure	Accumulated Loss in Weight	Accumulated Mortality
Days	Percent	Percent	Days	Percent	Percent
1	16.4	0	6	35.8	14
2	25.1	0	7	38.5	28
3	26.8	0	8	41.5	80
4	29.3	0	9	43.5	92
5	32.3	4	10	-	96
			11	All dead	100

Even during the first day of exposure to this temperature, the majority of the mussels were gaping. However, they quickly reacted to any mechanical stimuli and closed their shells. Practically the same conditions were noted during the second day. After that the reaction to stimuli became much slower and some of the widely gaping mussels closed their shells only after their mantle was touched several times with a sharp needle. The first mortality occurred during the fifth day. A very large group died during the 8th day, and all the remainder were dead by the 11th day.

Experiment 6. Exposure of mussels to an air temperature of 70.0° F.

The mussels exposed to this temperature began to gape during the first day losing large quantities of shell fluid. A comparatively rapid loss in weight continued throughout the experiment which lasted 8 days. Toward the end of the experiment the loss reached 43 percent of the total initial weight (Table 6).

Table 6 - Loss in Weight and Mortality of Mussels Exposed to an Air Temperature of 70°F.

Exposure	Accumulated Loss in Weight	Accumulated Mortality	Exposure	Accumulated Loss in Weight	Accumulated Mortality
Days	Percent	Percent	Days	Percent	Percent
1	16.7	0	5	38.3	12
2	22.5	0	6	40.7	66
3	28.6	0	7	43.0	84
4	35.1	4	8	All dead	100

No mortality was noted during the first three days. During this interval many mussels were gaping, but responded to stimulation and closed their shells. The first case of mortality was noted during the 4th day, and two days later the majority of the mussels died (Table 6). The exterior of the shells of the surviving animals was quite dry, and all of them were gaping and appeared weak. All the mussels of the sample died by the end of the 8th day of exposure.

SUMMARY

1. Rapidly frozen mussels lost little weight while in a frozen condition. Upon thawing all were found dead. Rapid loss in weight followed thawing.
2. When exposed to air temperatures of 30, 40, 50, 60, and 70° F. the mussels suffered the greatest loss in weight during the first 24-hour period. This loss was due to the escape of shell fluid.
3. At the end of the experiments in which the mussels were exposed to air temperatures ranging from 30 to 70° F., the loss in weight of the samples reached from 43 to 47 percent of the initial total weight.
4. Mortality of mussels began later and proceeded more slowly at lower temperatures. The first cases of mortality at temperatures of 30, 40, 50, 60, and 70° F. were recorded on the 14th, 8th, 7th, 5th, and 4th day respectively.
5. Fifty percent of the mussels exposed for 30 days to a temperature of 30° F. were still alive at the end of that period. At temperatures of 40, 50, 60, and 70° F. the last individuals died during the 22nd, 15th, 11th, and 8th day respectively.

COLOMBIAN AIRLINES CARRY FISH TO BOGOTA

By Clarence R. Lucas*

The Republic of Colombia, in the extreme northwest of the South American continent, was the first country in the world to transport freight by commercial airline. The airplane has since become a widespread and indispensable means of transportation in that country. All the main and many minor communities in Colombia are served today by airlines. Avianca, the largest company, in 1940 carried almost 60,000 passengers and 6,500 metric tons of freight. In view of this air activity, it is not surprising to find Colombian airlines carrying a considerable tonnage of fish.

The mountainous character of Colombia has made land transportation to Bogota from the seacoast very difficult. Since the early settlement of the Bogota area in the 1500's, freight has been carried in tortuous fashion from the Pacific port of Buenaventura and the Caribbean ports of Barranquilla and Cartagena. This travel, even today, consumes so much time that land transportation of salt-water fish to Bogota is a wasteful and expensive process.

A number of months ago, the possibility of transporting salt-water fish to Bogota by air was explored. It was anticipated that this city of 370,000 persons would utilize a considerable volume of these fish even at the high prices made necessary by air transport. A fish company in Barranquilla made arrangements for the trial shipments over the 450-mile air route to the capital city. As a result of the trials, a trade was developed that was supplying from 4,000 to 5,000 kilograms (8,800 to 11,000 pounds) a month in the latter part of 1942.



* Associate Fishery Economist, Division of Fishery Industries.

Shipping charge for the air freight was one Colombian peso per kilogram (about 27 cents U. S. per pound), making it necessary to charge over 40 cents U. S. per pound for the fish in Bogota markets.

The fish used in this trade are the choicest of salt-water fish available along the Colombian coast--snappers, groupers, snook, etc. These are cleaned and packed in five and ten gallon cans. The cans are sealed and the contents frozen solid. The fish arrive in Bogota still frozen after a three hour trip.

Inasmuch as the average daily wage in Bogota is less than two pesos (one peso equals 59 cents U. S.), salt-water fish priced at 40 cents U. S. are not purchased by the laborer. The privilege of eating fish is not entirely denied this citizen, however, as quantities of fresh-water catfish from Colombia's multitudinous river systems are available at about 20 cents U. S. per pound.

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PRODUCTION OF FISHERY PRODUCTS IN ALABAMA, LOUISIANA, MISSISSIPPI, AND TEXAS DURING 1942

By C. E. and Lorraine D. Peterson*

Production was maintained at a fairly normal level in the Gulf States throughout most of 1942 in spite of hardships caused by the war, according to the annual summary of the data in the Production Section of the daily Fishery Products Reports issued by the New Orleans office of the Fishery Market News Service. As in previous reports, it should be noted that the figures are only for the more important production points in Alabama, Louisiana, Mississippi, and Texas, and cannot be considered as totals for the entire area. Among the difficulties encountered were the taking over of some of the fishing grounds for gunnery ranges, the submarine menace, a very serious shortage of manpower, and the lack of adequate provisions for fishing craft.

During 1942, the New Orleans office of the Market News Service reported the production of 811,238 State Barrels (2,832,618 U. S. standard bushels) of oysters and 98,284,500 pounds of other fishery products. This represents a decrease of 2 percent from the previous year for oysters and 2 percent for other varieties. Production for the first 10 months of the year generally was ahead of 1941, but during the last 2 months of the year declined to such an extent that a decrease was shown for the entire year's operations. The sudden decrease appears to be the result of the cumulative effects of various manifestations of the war.

Production was reported in 46 classifications, divided as follows: fresh-water fish 4, salt-water fish 26, and shellfish and miscellaneous items 16. Shrimp, as usual, was the most important species, accounting for 77 percent of the production exclusive of oysters. Hard crabs made up an additional 14 percent. The more important varieties of salt-water fish were, in order of their importance mullet, red snapper, spotted sea trout, grouper, and red drum (redfish). The more important fresh-water species were catfish, buffalofish, and gaspergou.

During the year, shrimp landings were approximately 4 percent less than during 1941. Hard crabs showed an increase of 2 percent over the previous year, in spite of a large decline during December attributed to labor shortages. Landings of salt-water fish increased 19 percent, while those of fresh-water fish declined 39 percent. The greatest increases in salt-water fish were shown by mullet, spotted sea trout, red drum, king whiting, and blue runner. Decreases were registered by red snapper and grouper.

Table II, showing the monthly indexes of production of the more important varieties during 1942, follows. It can be used as a ready means of determining the seasonal variations in landings along the Gulf Coast. For each of the varieties listed, the month during which the largest landings were made has been given a value of 100. The landings in other months have been expressed in percentages of the largest month. The relative sizes of each month's production is quickly ascertainable by noting the relation of its index number to 100.

*Asst. Fishery Marketing Specialist and Senior Clerk, respectively, Division of Fishery Industries. Mr. Peterson was transferred to the War Department Quartermaster Market Center on November 3, 1942, and Mrs. Lorraine D. Peterson was named Acting Local Representative on that date.

Table I -- Production by Important Species -- 1942

Species	Unit	Production	Percentage Change From 1941
Catfish	Lbs.	422,100	-26
Blue runner	"	119,700	+87
Drum, black	"	147,390	+22
Drum, red	"	235,360	+61
Grouper	"	256,850	-22
King whiting	"	113,230	+84
Mullet	"	2,238,330	+91
Sea trout, spotted	"	302,261	+60
Snapper, red	"	2,170,850	-15
Crabs, hard	"	14,148,132	+2
Crab meat, fresh cooked	"	1,418,312	+1
Oysters:			
For canning	Bbls.	567,206	-7
Other	"	244,032	+13
Total	"	811,238	-2
Shrimp:			
For canning	Bbls.	187,285	+5
Other	"	172,951	-12
Total	"	360,236	-4

MONTHLY INDEX OF PRODUCTION OF MORE IMPORTANT SPECIES: Alabama, Mississippi, Louisiana & Texas, 1942
(Expressed for each item in percentages of its greatest monthly volume)

(Expressed for each item in percentages of its greatest monthly volume)																
Product	Unit	Year's Production	Largest Month	Percentage of largest month's landings												Avg.
				Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
FRESH-WATER FISH																
Catfish	Lbs.	422,100	59,820	26	27	59	100	83	46	60	89	52	76	47	41	59
SALT-WATER FISH																
Drum:																
Black	Lbs.	147,390	41,350	100	60	27	22	1	20	38	8	2	6	24	48	30
Red (Redfish)	"	235,360	68,180	100	30	36	10	15	24	37	7	8	15	15	47	29
Grouper	"	256,850	35,450	36	53	42	71	74	42	100	77	27	91	43	69	59
Millet	"	2,238,330	405,230	36	24	33	39	41	30	42	40	34	76	100	59	46
Sea trout, spotted	"	302,261	59,030	67	27	15	17	36	25	100	17	44	78	42	46	43
Snapper, red	"	2,170,850	282,500	57	100	63	80	67	56	43	55	40	69	58	82	64
SHELLFISH, ETC.																
Crabs, hard	Lbs.	14,148,132	2,694,226	10	14	12	25	67	86	100	65	47	55	38	7	44
Crab meat, fresh-cooked	"	1,418,312	233,824	11	17	13	29	80	99	100	77	56	71	44	8	50
Oysters:																
For canning	Bbls.	567,206	177,179	49	71	100	92	5	-	-	-	-	-	1	2	46
Other	"	244,032	37,754	100	84	98	52	20	10	8	11	36	61	71	96	54
Total	"	811,238	214,949	58	74	100	85	7	2	1	2	6	11	13	19	32
Total, 1941	"	829,727	182,537	94	83	100	89	18	1	1	1	6	12	17	32	38
Shrimp:																
For canning	Lbs.	39,329,850	8,842,470	25	9	2	15	20	20	2	57	87	100	71	38	37
Other	"	36,319,710	7,524,930	30	8	19	34	44	38	29	33	56	100	47	44	40
Total	"	75,649,560	16,367,400	27	9	10	24	31	28	14	46	73	100	60	41	39
Total, 1941	"	78,688,050	19,195,260	26	16	4	9	28	26	7	38	48	100	70	38	34

NOTE: Based on landings reported from production points listed in daily Fishery Products Reports.

The range of prices for fishery commodities sold in New Orleans' French Market is listed in Table III. Hard crabs usually are priced by the basket, the contents weighing 40 pounds while soft crabs sell by the dozen, averaging 4 pounds for 12. The larger sizes of red and black drum - "bulls" - sell individually rather than by the pound. They may weigh from 15 to 35 pounds.

There are no detailed standards for the fishery products landed at the Gulf ports covered in the production data. The classifications in Table IV represent those generally used by most dealers.

See following pages for Tables III and IV.

Table III - Range of Prices - New Orleans French Market - 1942
(Cents per pound except where indicated otherwise)

Species	January	February	March	April	May	June
Catfish	12½-15	15-17½	8-17½	12½-15	10-15	10-15
Drum, black:						
Bulls (each)	30-75	50-\$1.00	75-\$1.50	75-\$1.00	-	40-\$1.00
Medium	6-15	-	15-15	8-10	-	10-12½
Small	6-7	6-10	5	-	-	-
Rats	12½	-	17-20	-	-	-
Drum, red (redfish):						
Bulls (each)	75-\$1.00	75-\$1.50	\$1.50-2.00	\$1.50	\$1.50-1.75	\$1.50-1.75
Medium	10-15	-	-	-	-	-
Rats	12½	9-16	12½-20	15-17½	12½-22½	-
Flounders:						
Large	-	-	10-15	12½-15	6-12½	15-18
Small	-	-	5	5-10	-	3-12½
Garfish	1-3	3-5	3-6	-	-	-
King whiting, (ground mullet)	2-6	5	2-10	3-8	2½-6	1-8
Mullet	3-6	3-8	2-10	-	-	-
Sea catfish	-	-	-	-	-	7-10
Sea trout, spotted:						
Large	17-22½	22½-25	22½-30	-	22½-27½	20-30
Medium	12½-17½	18-20	15-20	10-30	15-20	15-25
Small	7-12½	12½-15	10-15	-	-	10-15
Sea trout, white	-	-	-	-	-	3-5
Sheepshead	7-12½	-	-	-	-	-
Crabs, hard (basket)	\$1.00-2.00	\$1.00-2.00	\$1.25-3.50	\$1.00-2.50	90-\$1.50	40-\$1.50
Crabs, soft (dozen)	-	-	-	50-\$2.00	50-\$1.50	\$1.00-1.50
Crayfish	-	-	8-10	7-10	6-7	6
Shrimp (bbl.):						
Large	\$20.00-24.00	-	-	-	\$22.00-30.00	\$30.00-36.00
Medium	\$15.00-19.50	\$9.00-36.00	\$11.00-36.00	\$13.50-36.00	\$18.00-24.00	\$21.00-30.00
Mixed	\$13.50	-	-	-	-	-
Small	\$9.00	-	-	-	\$8.00	\$7.50-18.

Species	July	August	September	October	November	December
Catfish	12½-17½	10-20	15-17½	10-17½	12½-25	10-18
Drum, black:						
Bulls (each)	40-\$1.00	50-\$1.00	-	-	\$1.00-2.00	50-\$1.25
Medium	7-10	-	-	-	10-15	10-20
Small	-	-	-	-	10-15	-
Rats	-	-	-	-	-	17½
Drum, red (redfish):						
Bulls (each)	\$1.25-1.50	\$1.50-1.75	-	\$1.25-1.75	\$1.75-2.00	\$1.00-1.75
Medium	12½-17½	15-17½	17½	15-17½	17½-25	9-15
Rats	17½	-	-	10-17½	-	9-17½
Flounders:						
Large	8-15	-	-	10-15	-	-
Small	-	-	-	-	-	-
Garfish	-	-	-	-	-	-
King whiting, (ground mullet)	2-6	3-8	8-10	5-7	10-11	-
Mullet	-	-	-	-	8	4½-10
Sea catfish	-	6-8	-	-	17½	-
Sea trout, spotted:						
Large	20-27½	17½-30	-	-	22½-30	20-30
Medium	15-18	10-17½	10-30	10-30	17½-25	12½-22½
Small	7-12½	8-12½	-	-	10-17½	5-17½
Sea trout, white	4-7	4-8	6-15	3-12½	8-10	-
Sheepshead	-	10-12½	-	-	15-17½	-
Crabs, hard (basket)	50-\$1.50	75-\$2.50	75-\$2.00	75-\$2.00	75-\$2.00	\$1.50-3.00
Crabs, soft (dozen)	-	-	-	-	-	-
Crayfish	-	-	-	-	-	-
Shrimp (bbl.):						
Large	-	-	-	-	\$22.50-36.00	\$23.00-36.00
Medium	-	-	-	-	\$18.00-26.00	\$20.00-22.50
Mixed	\$7.50-36.00	\$6.00-36.00	\$17.50-21.00	\$18.00-24.00	\$15.00-27.00	-
Small	-	-	\$13.50-16.50	\$12.50-18.00	\$7.50-19.50	\$9.00-18.00

Table IV - Market Classifications and Approximate Weights of Gulf Species

Species	Market Classification	Approximate weight, etc.	Remarks ^a
FRESH-WATER FISH			
Buffalofish	--	3 - 20	Round
Carp	--	2 - 8	Round
Catfish	--	1 - 40	Round
Caspargou	--	1 - 5	Round
SALT-WATER FISH			
Bluefish	--	1 - 6	Round
Blue runner	--	$\frac{1}{2}$ - 1	Round
Cabio (Lemonfish)	--	10-50	Round
Creville (Jacks)	--	10-20	Round
Croaker	--	$\frac{1}{2}$ - 1	Round
Drum:			
Black	Bulls	15-35	Round
	Medium	2 - 15	
Red (Redfish)	Bulls	15-35	Round
	Medium	4 - 15	
	Rats	2 - 4	
Flounder	Large	1 - 5	Round
	Small	$\frac{1}{2}$ - 1	
Garfish	--	10-60	Round, or skinned and dressed.
Grouper	--	5 - 15	Drawn
Jewfish (Warsaw)	--	50-500	Round
King whiting (Ground mullet)	--	$\frac{1}{2}$ - 1	Round
Mullet	--	$\frac{1}{2}$ - 3	Round
Pompano	--	$\frac{1}{2}$ - 2 $\frac{1}{2}$	Round
Sawfish	--	50-200	Round
Sea catfish	--	1 - 3	Round
Sea trout:			
Spotted	Large	1 - 4	Round
	Medium	$\frac{3}{4}$ - 1	
	Small	$\frac{1}{2}$ - $\frac{3}{4}$	
White	--	$\frac{1}{2}$ - 1 $\frac{1}{2}$	Round
Shark	--	30-200	Round
Sheepshead	--	$\frac{3}{4}$ -8	Round
Snapper, red	--	3 - 15	Drawn
Spanish mackerel	--	1 - 3	Round
Spot	--	$\frac{1}{2}$ - 1	Round
Tripletail (Blackfish)	--	2 - 10	Round
SHELLFISH, ETC.			
Crabs:			
Hard	--	$\frac{1}{3}$ - $\frac{2}{3}$	Live
Soft	--	$\frac{1}{6}$ - $\frac{1}{2}$	Live
Crayfish	--	20-25 per lb.	Live
Frogs	--	$\frac{1}{2}$ - 1	Live
Oysters	State barrel: Ala. and Miss. Louisiana Texas	8,478.6 cu. in. 6,445.4 cu. in. 8,100.0 cu. in.	In shell
Shrimp**	Large Medium Small	Under 18 per lb. 18-35 " " Over 35 " "	Heads on
Shrimp***	Jumbo Large Large medium Medium Small	Under 25 per lb. 25-30 " " 28-30 " " 30-35 " " 35 and up " "	Count is listed as "heads off" but are landed "heads on".
Shrimp	Barrel	210 lbs. 125 lbs.	Heads on Heads off
Sea turtle	--	50-150	Live
Squid	--	9 - 12 per lb.	Round
Turtle	--	1 - 10	Live

^a Round - fish as caught. Drawn - entrails only removed. Dressed - Entrails, head, and sometimes tail and other fins removed.

** New Orleans French Market.

***New York Salt-water Market

TRAWLING AND THE STOCKS OF FISH

In the March 20 issue of *Nature*, a British publication, published in London, appeared the following review which contains many items of interest to our fishing industry.

"In a paper read before the Royal Society of Arts on January 27 on 'Trawling and the Stocks of Fish', Dr. E. S. Russell, director of fishery investigations, Ministry of Agriculture and Fisheries, brought out in a convincing manner the problems which will confront us after the War in connexion with the national fish stocks of Great Britain and those of our near neighbours. In a summary of the history of the trawling industry from its beginning rather more than a century ago up to the present day, he traced its gradual growth. The demersal fishery, consisting of those fish living on or near the bottom, such as cod, haddock, hake, plaice and others, began with sailing boats fishing near shore. Then they ventured into the deep waters of the North Sea and, with the advent of the steam trawler and the great spread of fishing, went as far as Iceland and the Faroes, the Barents Sea and Bear Island, south of Spitsbergen. It is a tale of ever-increasing strength in boats and gear, and, running with it, an increase of fish--up to a certain point.

"In 1866, a Royal Commission recommended that all restrictions on deep-sea fishing should be swept away and the industry allowed complete freedom of development--a measure which favoured enormously the later expansion of the trawl fisheries. It is a different matter nowadays. During the period of expansion there has been an almost continuous increase in the size and power of the steam trawler and in its fishing quality. It is a case of continued exploitation of the stocks of fish, beginning in a small way on grounds nearest at hand and spreading to all waters within reach, made possible by technical improvements in ships and gear and the building up of the fishing fleets in ever-growing strength.

"The stocks of fish are not unlimited. The intense fishing made inroads into these stocks which are shown in the detailed statistics available, some of which were quoted by Dr. Russell. Those from the beginning of the century show a marked increase in the quantity of fish landed from 1886 to 1907; then follows a period of stabilization. With less fishing, landings necessarily fell heavily in the war period during 1914-18, in 1919-20 recovered to a level rather higher than pre-war, and in 1928 were not very different from 1907-13. Then comes a time when there is a sign of over-fishing. The landings fall off notwithstanding improvements in gear, and the average size of the fish is less. In spite of the fact that the war years had made it possible for the fish to recuperate, the very intense fishing which came after had made inroads on the stocks which could not be balanced. The only exception to the diminution of the stock was the cod in the extreme north. Here the fish were so unusually abundant, owing to changed hydrographical conditions, that this fishery itself was obliged to exercise restriction. Apart from the cod, the density of all the important demersal fish was steadily diminishing. Over-fishing was clearly the cause. The fish were not allowed to grow up.

"At this point the present War broke out: once again, far fewer vessels are engaged in the fishery, once again the fish have recuperated and have grown to their full size and strength. After the War of 1914-18, enough was not known of the causes of these diminishing stocks. Modern research gives us no such excuse. As Dr. Russell states: 'A conclusion of great importance has been reached, namely, that in most fully developed fisheries a state of over-fishing has been reached, a state where the ever-increasing intensity of fishing has resulted, not in an augmentation of the catch but in a diminution.' He illustrates this by the haddock statistics, but it is the same story with almost any of the other important demersal fish. He has dealt with the subject fully in his recent book, The Over-Fishing Problem (Cambridge, 1942).*

"There is a grave warning here. Already something has been done by enlarging the mesh of the nets in order that immature fish may escape, but the question of immature fish, important as it is, is not nearly so important as the question of over-fishing. Canada has already so successfully controlled her halibut fishery that it has improved enormously.

"With recuperated stocks and fishing fleets greatly reduced by the ravages of war, there are now exceptional opportunities to plan a more rational exploitation of the fisheries of Great Britain, and for this it is evident that international agreement will be needed. The object of such agreement will be to secure from each fishery area the maximum steady yield that the stocks can afford--to draw the interest while leaving the capital untouched. The

*Reviewed in *Fishery Market News* in May 1942 issue, page 34.

only cure for over-fishing is to fish less, but with our improved knowledge it is clear that proper control will bring better profit to the industry and will lead to an increase, rather than a decrease, in the amount of fish landed."

U. S. WARTIME FOOD SITUATION

Compared with 1942 and roughly estimated on the basis of prospective 1943 output, civilians this year will have about 11 percent less meat; 27 percent less canned fish and shell fish; 21 percent less butter; 11 percent less cheese; 15 percent less canned milk; 51 percent less canned fruits; from 3 percent to 25 percent less of various fresh vegetables; 27 percent less canned vegetables; 6 percent less dry beans; about 22 percent less sugar; 21 percent less rice; 29 percent less coffee; 60 percent less tea; and 12 percent less cocoa, according to an OWI report on April 15.

Civilians will have about the same amount of fresh and frozen fish, eggs, turkeys, fluid milk and cream, lard and other cooking fats, fresh citrus fruits, canned fruit juices, dried fruits, tomatoes, potatoes and sweet potatoes, corn, oats, and barley for human consumption.

Civilians will have 30 percent more chicken; 57 percent more margarine; 9 percent more apples; 13 percent more frozen fruits; 7 percent more wheat; 13 percent more rye.

Apparent Civilian Consumption on a Per Capita Basis

Commodity	1935-39					1943 as a percentage of			
	1935-39	1940	1941	1942	1943	1935-39	1940	1941	1942
Total meats (dressed wt.)	Lb. 126	Lb. 142	Lb. 143	Lb. 140	Lb. 124	Pct. 98	Pct. 87	Pct. 87	Pct. 89
Fish:									
Fresh and frozen (dressed wt.)	-	-	6.0	5.7	5.6	-	-	93	98
Canned fish and shellfish	-	-	4.9	3.3	2.4	-	-	49	73
Cured fish	-	-	.9	.8	.6	-	-	67	75
Poultry products:									
Eggs	37.5	39.9	39.3	40.0	39.9	106	100	102	100
Chickens (dressed wt.)	18.0	18.1	19.5	21.9	28.4	158	157	146	130
Turkeys (dressed wt.)	2.7	3.6	3.6	3.8	3.9	144	108	108	103

Fishery food supplies as reported in the April issue of The National Food Situation follow:

	Unit	1941	1942	1943
Fresh and frozen (dressed weight)	Mil. lbs.	820	875	887
Canned fish and shellfish	" "	1228	1003	910
Cured fish	" "	160	140	120

Year-end stocks of canned fish and shellfish were reported as 346 million pounds in 1941, 169 million in 1942, and estimated at 168 million in 1943. Stocks at the end of 1943 include commercial stocks and Government holdings.

WAR SHIPPING ADMINISTRATION AUTHORIZED TO SELL FISHING VESSELS TO FORMER OWNERS

The Congress has passed a bill (H.R. 2238) which has been signed by the President authorizing the War Shipping Administration to return fishing craft for which title has been acquired by the Government to their former owners upon repayment to the United States of the compensation paid for the craft less such allowances as the War Shipping Administration may deem reasonable. The text of the bill follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any vessel formerly used or suitable for use in the fisheries or industries related thereto the title to which has been or may hereafter be acquired by the United States through purchase or requisition may be returned to private ownership in accordance with the provisions of this Act.

Sec. 2. Every such vessel shall, upon determination by the department or agency having possession thereof that the vessel is no longer needed or can be spared by such department

or agency without detriment to its service, be made available to the Administrator of the War Shipping Administration (hereinafter referred to as the Administrator), who shall notify the owner from whom such vessel was purchased or requisitioned that the vessel may be returned to such owner upon repayment to the United States of the compensation paid therefor less such allowances as the Administrator may deem reasonable (1) to cover the cost of such reconditioning as the Administrator and the owner may find necessary to make the vessel suitable for use in the fisheries or industries related thereto (ordinary wear and tear excepted), and (2) to compensate such owner for the use of the vessel by the United States, and upon compliance with such other terms and conditions as the Administrator may prescribe. The determination of such allowances by the Administrator shall be final notwithstanding any other provision of law.

Sec. 3. If any such owner shall fail, within a reasonable time after notice (which time shall be specified in the notice but may be extended by the Administrator), to make arrangements satisfactory to the Administrator for such return of the vessel or shall expressly waive the right thereto, the Administrator may advertise the vessel for sale upon competitive sealed bids subject to such terms and conditions as the Administrator may prescribe, including a requirement of assurance that the vessel will not be used, for the period of one year from the date of sale, other than in the fisheries or industries related thereto, without the approval of the Administrator: Provided, however, That the Administrator may reject any bid which does not equal the purchase price or compensation paid or payable by the United States for such vessel less a reasonable allowance to cover the cost of reconditioning as hereinabove defined.

Sec. 4. The Administrator may withhold from the funds received for the return or sale of any such vessel the expenses incurred by him in such return or sale, and shall pay over the balance of such receipts to the department or agency by which such vessel was made available.

FISHING VESSELS RETURNED BY NAVY

Arrangements have been made for the return to their owners by the War Shipping Administration of 34 fishing vessels which had been taken over by the Navy early in the war, Coordinator of Fisheries Harold L. Ickes announced April 2. Thirty of the vessels are being returned to owners in the Alaskan salmon industry. The other four are purse seiners used in the California sardine industry. These vessels are in addition to a number of craft being returned by the Army to Alaskan owners. The purse seiners are 70-ton vessels--large for their type. It is estimated that these craft can, if used for fishing steadily through the season, produce 6,000,000 (six million) pounds or more each.

FISHERMEN RECRUITED BY U. S. EMPLOYMENT SERVICE

Through its Area office at 155 John Street, New York City, the Office of the Coordinator of Fisheries has made an experimental trial in recruiting men for the commercial fisheries. There was sufficient initial success to expand the experiment. The United States Employment Service will put forth the publicity and channel the proper men into the industry hereafter. The Area office of the Fishery Coordinator will be, however, one of the sources of information on jobs actually open at the time in the pound net, trap, and vessel fisheries.

Those operators in Delaware, New Jersey, New York, Connecticut and Rhode Island who are in need of experienced or other capable workmen are requested to contact the New York office and make known their needs. The number of men needed should be indicated and whether youths, 16 to 17 years old who are muscular and willing to work can be used, also men over 45 years of age who have been used to hard work but who may not have done any fishing. The monthly pay and bonuses, if any, should be stated and the location of pound net camps and other information on living conditions, such as whether bed and board are furnished without additional cost to the worker.

This information should be sent immediately, and from now on at such times as may be necessary in accordance with the need for men to the Office of the Coordinator of Fisheries, 155 John Street, New York City.

FEDERAL NUTRITION COORDINATING AGENCY TRANSFERRED TO FDA

On March 6, the Nutrition Division of the Office of Defense Health and Welfare Services was transferred, and will continue its work as the NUTRITION AND FOOD CONSERVATION BRANCH of the Food Distribution Administration. This agency has acted and will continue to be a Federal coordinating unit in the field of nutrition.

The Nutrition and Food Conservation Branch will continue program development to bring about food conservation and the best nutritional use of food. Wartime food demonstrations sponsored by this agency are carried out by State and local nutrition committees affiliated in most cases with local Defense Councils. These food demonstrations are being planned for all states. Better feeding practices in industrial plants is another of their projects.

The Washington staff of the Fish and Wildlife Service has had good relations with the central organization, and has been able to develop new outlets for information on current activities of the fishing industry.

It is recommended that the fishing industry contact the following regional representatives when they have facts about fishery products which they want to distribute to nutrition specialists:

FOOD DISTRIBUTION ADMINISTRATION

Regional Administrators and Regional Nutrition Representatives

Region	Office of Administrator	Regional Nutrition Representatives	States
Northeast	Buell F. Mahen, 150 Broadway, New York, N. Y.	Miss Lorna Barber Miss Rosabel Burch Miss Violet Highbee* Dr. H. F. Kilander* Miss Martha Rogin	Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Jersey, New Hampshire, New York, Pennsylvania, Rhode Island, Vermont, West Virginia.
Southern	Col. James N. Palmer, Western Union Bldg., Marietta & Forsyth Sts., Atlanta, Georgia.	Miss Myra Reagan	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.
Southwest	Lester J. Cappelman, 425 Wilson Building, Dallas, Texas.	Miss Hazel Bratley Miss Grace I. Neely	Arkansas, Oklahoma, Louisiana, Texas.
Rocky Mountain	Leonard Trainer, Burns Vault Building, 1536 Walton Street, Denver, Colorado.	Miss Harriett Anderson* Mrs. Agnes E. Vaughn Mrs. Anne K. Weaver	Colorado, Idaho, Montana, New Mexico, Utah, Wyoming.
Pacific	Merritt A. Clevenger, 821 Market Street, San Francisco, Calif.	Mr. William E. Broeg* Mrs. Isabel Costigan Miss Helen Walsh Miss Rae Russell	Arizona, California, Nevada, Oregon, Washington.
Midwest	Francis D. Cronin, Old Colony Building, Grand Avenue at West Tenth Street, Des Moines, Iowa.	Miss Velma Clark Miss Katherine Helzer Miss M. Elizabeth Jensen*	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
Great Lakes	Earl O. Pollock, 5 Wabash Avenue, Chicago, Illinois.	Mr. Charles P. Alcorn Mrs. Gertrude Austin Miss Mildred Bonnell* Mrs. Isogene Cox	Illinois, Indiana, Michigan, Ohio, Wisconsin.

*Regional Industrial Nutrition Representatives

PURCHASE OF RUBBER BOOTS

It has been brought to the attention of the Office of the Coordinator of Fisheries that a number of commercial fishermen recently have experienced difficulty in obtaining permission from local ration boards to purchase rubber boots. The matter has been discussed with representatives of the Office of Price Administration in Washington. The Coordinator's Office has been informed that OPA officials are fully aware of the fishermen's need for rubber boots. In writing the ration order covering this article, provision was made for the release of rubber boots to fishermen. However, it was found that some local ration boards have been over-zealous in "screening" requests for boots and occasionally have refused to permit legitimate commercial fishermen to obtain rubber boots to meet their needs.

If bona fide commercial fishermen are being refused permission to purchase boots, they should submit an appeal to their local ration board on OPA Form R-122 which can be obtained from the board. The local board will then forward the appeal, together with their file on the case, to the State OPA director. Washington officials of OPA are of the opinion that members of the State director's office are fully conversant with the fishermen's need for rubber boots. Consequently, the State director may be expected to reverse the decision of local boards if it is demonstrated conclusively that the persons needing rubber boots are bona fide commercial fishermen.

If an adverse ruling is made by the State director, a further appeal on Form R-122 should be prepared and filed with the State director who will forward it, together with the applicant's file, to the OPA regional director. If an adverse ruling is obtained from the regional director, the same procedure can be followed in appealing to the Washington, D. C., headquarters of OPA which will render a final decision.

INDEX OF PATENTS

A 4-page leaflet entitled "Index of Patents Vested in the Alien Property Custodian as of January 1943" may be obtained without charge from the Office of Alien Property Custodian, Division of Patent Administration, Washington, D. C. Patents are listed by Class, Title and Number Vested.

Any qualified American firm can obtain for \$50.00 an exclusive license to use enemy patents without charge. A similar arrangement applies to patents of occupied countries except that royalties will be negotiated.

Classified lists of patents and patent applications may be obtained by writing the Office of Alien Property Custodian, Chicago. All classes are sold for 10 cents each, except a few which are 25 cents each. Complete catalog, without binders, \$5.00. Printed copies of vested patents and drawings and specifications of vested patent applications may be secured from the Commissioner of Patents, Washington, D. C., for 10 cents each.

OUTLOOK FOR THE ALASKA HERRING FISHERY IN 1943

Fishery Leaflet No. 16 entitled "Outlook for the Alaska Herring Fishery in 1943" by E. H. Dahlgren and L. N. Kolloen, may be procured without charge from the Fish and Wildlife Service, Merchandise Mart, Chicago, Illinois. The authors conclude that in the Kodiak District the outlook for 1943 is good. In the Prince William Sound District, the rehabilitation of the herring fishery to its former level must await the entrance of successful year classes not yet mature. In the Southeastern Alaska District, the prediction that the abundance levels in this district have partially recovered from the low of recent years will be on trial in this fishery in 1943.

PROGRESS IN TECHNOLOGY

Seattle, Washington.--A method for the prediction of the stability of vitamin A in fish oils has been developed wherein air is bubbled through the oil which is held at an elevated temperature. The time required for one-half of the vitamin A to be destroyed is determined, and under the accelerated experimental conditions this amounts to only a few hours as compared to many months under commercial conditions.

Using this technique, a study is being carried out on the effect of the degree of freshness of fish livers and methods of storing them upon the stability of the vitamin A in the oil rendered from them. Preliminary results indicate that vitamin A is at least in some cases most stable in oils rendered from very stale or putrid livers, and least stable in oil from livers which are slightly stale, while vitamin A in oil from very fresh livers apparently has an intermediate stability. Indications have also been obtained that vitamin A in oil from salted livers is more stable than that from unsalted livers.

In sampling a batch of fish livers to determine the vitamin and oil content, greatest accuracy is obtained if a number of the livers are ground together and a sample taken from the ground, mixed liver. When dealing with such livers as scupfin shark where each liver may weigh 6 pounds or more and the price of the liver is about \$5.00 per pound, the cost of such sampling technique is prohibitive.

Several alternate methods of sampling livers have been studied. Reasonably accurate results are obtainable when a minimum of six pieces are cut with a knife from the edge of the liver at equal intervals, starting at the tip of one lobe and continuing to the tip of the other. The total weight of liver cut out in this way should be between 2 and 4 ounces for each liver sampled.

An example of the precision of this method is given by an analysis of 13 scupfin shark livers where each liver was sampled by the method described and then each liver was also ground up separately (after removal of sample pieces) and analyzed. In the case of the oil analysis the average, relative percent deviation was 2.5 percent and the maximum deviation 6.3 percent. In the case of the vitamin A assay, the average relative percent deviation was 2.6 percent and the maximum deviation 5.7 percent. This degree of precision is adequate for most purposes, since other errors besides those encountered in sampling are often of equal magnitude.

A series of progress reports on the work being done in cooperation with the Washington State Fisheries Department on factors influencing the vitamin A content of the livers of dogfish and shark will be issued at irregular intervals, probably about once a month. Progress Report No. 1 covering analyses made during the period March 16 to April 15, 1943, is now available for distribution. Data have been tabulated on 193 livers, showing sex of fish from which obtained, weight and length of fish, details as to place and method of catching fish, color of liver, weight and oil content of liver, and vitamin A assay of liver oil. Anyone wishing to obtain a copy of this report or who would like to have his name placed on the mailing list to obtain future copies of these reports should send a request to Fishery Technological Laboratory, 2725 Montlake Boulevard, Seattle, Washington.

INDUSTRY POSTERS ANNOUNCED

Because its men and their work are caught up with one of the most vital weapons of war--FOOD--the fishing industry has come again to the fore as one whose activities are essential to the conduct of that war.

One way to bring about national recognition of this fact is to tell the nation.

Posters are potently telling!

Through the Office of War Information, the Office of the Coordinator has engineered the creation and printing of 50,000 three-color posters for strategic distribution throughout the fishing industry. These posters--of two types--will bear the themes of (1) Increase production! and (2) They Also Serve--At Sea!

Early in June these posters will be available. Distribution will be made in a variety of ways--one, through the Fishery Market News offices of the Service.

If you or your firm do not receive copies, in the regular course of events by June 15 at latest, and wish to have a supply, please write us to that effect.

Federal Orders, Purchases, and Regulations

FEBRUARY PURCHASES OF FISHERY PRODUCTS BY FDA TOTAL \$1,807,830

Total purchases of fishery products by the Food Distribution Administration in February amounted to \$1,807,830, according to information furnished by that organization. Compared with purchases in January of \$5,602,381 this was a decline of 68 percent. Purchases of all commodities in February had a total value of \$117,381,972.

Purchases of Fishery Products by F.D.A.

Commodity	Unit	February 1943		Jan. 1 - Feb. 28, 1943		Mar. 15, 1941-Feb. 28, 1943	
		Quantity	F.O.B. Cost	Quantity	F.O.B. Cost	Quantity	F.O.B. Cost
<u>FISH</u>			<u>Dollars</u>		<u>Dollars</u>		<u>Dollars</u>
Herring, canned	Cases	-	-	3,878	12,280	262,590	786,951
Mackerel, do	do	15,820	80,524	132,225	672,553	698,277	3,479,307
Pilchards, do	do	212,934	854,180	674,904	2,681,826	5,723,001	20,691,101
Salmon, do	do	34,829	362,511	241,218	2,153,498	5,358,685	50,500,713
Sardines, do	do	-	-	9,904	40,418	2,141,082	8,458,400
Fish, Misc., do	do	40	76	40	76	20,040	136,076
Flaked fish, do	do	1,225	16,038	1,225	16,038	38,176	332,917
Total		264,848	1,313,329	1,063,394	5,576,689	14,241,851	84,385,465
Dry-salted fish	Pounds	672,000	72,000	949,376	110,549	11,260,896	1,536,451
<u>BY-PRODUCTS</u>							
Fish meal	do	800,000	30,730	800,000	30,730	3,119,100	121,982
Oyster shell flour	do	-	-	-	-	1,350,000	4,582
Oyster shell grits	do	-	-	-	-	1,280,000	5,016
<u>VITAMINS</u>							
Vitamin A Fish							
Liver oil	M Units	2,188,954	327,562	7,534,910	1,167,592	36,483,060	5,529,693
Vitamin A and D							
Fish Liver oil	Gallons	14,437	64,209	183,712	524,651	190,362	547,718
Total		-	391,771	-	1,692,243	-	6,077,411
Grand Total		-	1,807,830	-	7,410,211	-	92,130,907

FISHERY PRODUCTS IN WPB MATERIAL SUBSTITUTES AND SUPPLY LIST

Giving a comprehensive picture of the current status of materials used in war and essential civilian production, Issue No. 8 of the Material Substitutions and Supply List was released April 22 by the War Production Board. The list is designed to guide industry in the conservation of more critical materials through substitution of less critical and non-critical materials.

Ranked on the basis of necessity and availability, more than 500 materials are arranged in the following three groups with fishery products named in parentheses:

Group I - Materials which are INSUFFICIENT in supply either for war demands alone or for war plus essential civilian demands (agar and sperm oil).

Group II- Materials which are SUFFICIENT for war and essential civilian production (animal glues, fish oils and fish liver oils).

Group III- Materials available in sufficient quantity for use as SUBSTITUTES for the more critical materials in Groups I and II (vitamin A oils).

REGULATIONS GOVERNING THE PLACING OF FISHING STRUCTURES IN CHESAPEAKE BAY AMENDED

REGULATIONS GOVERNING THE PLACING OF FISHING STRUCTURES IN CHESAPEAKE BAY AND ITS TRIBUTARY WATERS, is the title of a bulletin recently released by the Office of the Secretary of War. The bulletin carries current information of interest to fishermen, oystermen and crabbers who desire to operate in Chesapeake Bay, Maryland, and Virginia, and navigable tributaries thereto. It may be secured by writing to the U. S. District Engineer, 8th Floor, Standard Oil Building, Baltimore, Maryland; 1st and Douglas Streets, N. W., Washington, D. C., or Fort Norfolk, Norfolk, Virginia.

ADVANCE ALLOTMENTS OF RATIONED FOODS PROVIDED BY OPA ORDER

A method that Group I seasonal institutional users, such as small summer camps, may follow to get rationed foods in advance, to meet their seasonal requirements was announced April 23 by the Office of Price Administration. A similar method was also revealed in regard to Group II and III users who must obtain allotments for more than one allotment period.

The three institutional users groups affected by the change in the rationing regulations, contained in Amendment 16 to General Ration Order 5, effective April 29, include:

Group III, consisting of a general group including hotels, restaurants, hospitals, large summer resorts, fishing boats and other establishments.

Group II and III institutional users who, because of transportation difficulties or unusually long distances from markets, must obtain rationed foods in quantities for more than one allotment period may apply to the Board for relief.

Application must be made to the local Board where the institutional user is registered. The amount of the future allotment granted will equal the amount of the last allotment issued. For example, on May 1, 1943, an applicant applies for two allotments, covering his May-June allotment period and also his July-August allotment period. Suppose his allotment for the May-June period is 500 pounds of sugar. The Board may then grant a future allotment for an additional 500 pounds of sugar, covering the July-August period.

When the applicant next applies for an allotment, which in this illustration would be for the September-October period, the Board checks the amount of his July-August allotment. If the future allotment granted was more than what the applicant would have received had he applied for that allotment at the usual time, the difference will be deducted from his September-October allotment. Conversely, if the amount of the future allotment was less than the amount which he would otherwise have received, the Board may issue certificates for the difference.

The OPA also announced that applications for the regular May-June allotments need not be made on any particular form, but must merely be made to the Board in writing.

CRAB AND SHRIMP MEAL EXEMPT FROM PRICE CONTROL

Whole crab and shrimp meal are among the miscellaneous items exempted from price control by OPA on April 26 because they have an insignificant effect on the cost of living and control involves disproportionate administrative and enforcement difficulties. The exemptions are contained in Supplementary Order No. 45, effective May 1.

OCCUPATIONAL CERTIFICATION FORM 42-B TO BE REVISED

Recent amendments to the Selective Service regulations, which eliminated Class 3-B, affect the use of Occupational Certification Form 42-B and also the instructions which are printed on this form relative to the classification of registrants into Class 3-B.

Form 42-B will soon be revised to eliminate any reference to classification into Class 3-B. There will be no other change in the form. The present supply of these forms will be used until exhausted, and local boards will simply disregard that part of the instructions on the form which refer to classification into Class 3-B.

Employers who are engaged in an activity essential to the support of the war effort should file Form 42-B for men with children under 18 and born on or before September 14, 1942. Form 42-B should bear the State Acceptance number and certification if a Replacement Schedule is in effect. The local board will thus be advised of the registrant's employment in an essential activity, and the employer will be provided with a notice of reopening of classification, as provided in Section 626.2-1 of the Selective Service regulations.

Sectional Marketing Reviews

FISHERIES OF ALABAMA

Spoonbill fishermen in northern Alabama were quite active during April. Eighty fishermen fished primarily for spoonbill in Wheeler, Wilson, and Pickwick Reservoirs. These fishermen sold the following quantities of fish during the period: 44,650 pounds of dressed spoonbill, 300 pounds of dressed gar, 14,400 pounds of catfish, 1,200 pounds of buffalo, 900 pounds of carp, and 250 pounds of sheepshead (fresh-water drum). One sheepshead, believed to be a record for the area, weighed 43 pounds. Prices per pound paid to the fishermen were as follows: Spoonbill, dressed, 20 cents; gar, dressed, 10 cents; catfish, buffalo, sheepshead, and carp, 15 cents (round weight).

FISHERIES OF WASHINGTON AND OREGON

A meeting of operators of reduction plants in the Columbia River, Oregon area and Grays Harbor, Washington area, was held March 30 at Aberdeen, Washington, to discuss possibilities of conducting a pilchard fishery and operating reduction plants during the summer of 1943.

Since the reduction plant operators indicated a desire to operate during the current season, and since the Northwest pilchard fishery has produced between 50 and 80 million pounds of pilchards during recent years, it appeared advisable to call another meeting of the plant operators with representatives of pilchard fishermen attending. This meeting was arranged by the Area Coordinator in the Seattle area to be held April 5 in the Seattle Fishery Market News office. It was attended by all of the reduction plant operators of the Pacific Northwest and representatives of commercial fishermen, fishermen's union and Mr. Sette, the area coordinator from California. At this meeting it was learned that six large pilchard seiners are preparing their craft to enter the otter-trawl fishery off Washington and Oregon during the current season, and will be scouting for pilchards in June and July. It was also reported that 19 pilchard seiners will engage in halibut fishing for the next few months, and will be available for transfer to pilchard fishing if favorable reports are received. Some of the fishermen indicated that the use of an airplane for scouting purposes was highly desirable in order to assist the fishermen in locating schools of pilchards. Efforts are now under way to arrange for such a service through the Coast Guard. As a result of these two meetings, it has been recommended that an industry committee be appointed to serve in discussing future problems of the Northwest pilchard industry.

About March 20, soupfin shark livers practically disappeared from the Seattle market, as most of the vessels engaged in this fishery were returning to port to prepare for the halibut and salmon fisheries. In the same week, unusually heavy runs of herring were reported in Puget Sound. This fish, normally used for bait or salting, is being prepared for sale on the fresh fish market. They were caught in weirs in the vicinity of Holmes Harbor. The price has held steady at \$5.00 per barrel at Seattle, and it is understood that some herring canning is being done at one of the Astoria canneries. The first half of the Seattle halibut fleet (Vessel names beginning from A to L) left for the fishing banks about April 5, with the second half (M to Z) leaving 8 days later. The season opened this year on April 16, and the first delivery of Pacific halibut was made to Prince Rupert on April 17 when a Canadian vessel landed a fare of 4,000 pounds at 23 cents for medium halibut and 20 cents for other grades.

On April 9, the U. S. Coast Guard released Bulletin No. 74. These regulations, which became effective April 12, permit limited night operation of fishing vessels out of certain ports along the Oregon-Washington Coast. Fishing vessels are now permitted to enter most ports not later than 11:00 p.m. and may leave for the fishing grounds at any time during the night. Fishing craft from Willapa Harbor, Washington, and Port Orford, Oregon, may depart for the fishing grounds during the night but must return before sunset. Prior to the new regulations fishing vessels were not allowed to enter or leave the above ports between sunset and sunrise.

The season's first heavy run of king salmon appeared off Cape Flattery during the week ending April 17. Individual boat catches landed in Seattle ranged as high as 4,000 pounds,

with average trips of king salmon running over 1,300 pounds. Nearly 16,000 pounds of king salmon, brought in by 12 trollers, was sold over the Seattle Salmon Exchange on April 17 at prices ranging from 42 to 42½ cents per pound. During the corresponding week a year ago, when almost the same amount of king salmon arrived in Seattle, the price for large kings ranged as high as 31 cents per pound.

Fresh Fish Trade

1942 THREE PORTS LANDINGS 100 MILLION POUNDS LESS THAN 1941

The total landings of fishery products at the ports of Boston and Gloucester, Massachusetts, and Portland, Maine, during 1942 amounted to 372,967,905 pounds, valued at \$19,312,523 to the fishermen, according to Current Fishery Statistics No. 55 released by the Fish and Wildlife Service. Although the 1942 production was below that of the record year of 1941 by more than 100 million pounds, it was about equal to the catch in 1939 and 1940. The value to the fishermen, however, was 25 percent greater than that received during 1941 despite the large reduction in landings. This resulted in the establishment of a new record for value of the catch landed at these ports. The weighted average price per pound during 1942 for all species was 5.18 cents as compared with 3.24 cents during 1941 and 2.89 cents during 1940. In the order of the volume landed during the year, rosefish ranked first with 115,146,964 pounds; haddock, second, with 109,799,196 pounds; cod, third, with 43,260,070 pounds; mackerel, fourth, with 28,503,716 pounds; and whiting, fifth, with 28,109,171 pounds. Landings of groundfishes--cod, haddock, hake, pollock, and cusk--totaled 184,688,203 pounds during 1942, a decrease of 30 percent or 80,692,235 pounds under landings of these species in 1941. The decline in groundfish landings, and a drop of 24,205,821 pounds in rosefish receipts account for the major portion of the decline in the total landings as compared with 1941.

By ports, 1942 landings were distributed as follows: Boston, 194,687,188 pounds; valued at \$12,548,742; Gloucester, 157,740,961 pounds, valued at \$6,083,864; and Portland, 20,539,756 pounds, valued at \$679,917. The landings at Gloucester in 1942 established a new record high for receipts at that port. Due to the heavier landings of the higher priced species at Boston, the weighted average price for fish received at that port was higher than at Gloucester or Portland.

Heaviest landings were reported during the month of August when 43,266,473 pounds were received at the three ports, while the receipts during February were the lightest with only 11,559,115 pounds landed. The low February landings were due mainly to a tie-up of a large portion of Boston's otter trawl fleet as a result of a dispute over war risk insurance.

THREE PORTS LANDINGS SHOW INCREASE OVER YEAR AGO

Fishing vessels delivering their catches during February to the ports of Boston and Gloucester, Mass., and Portland, Maine, landed 15,440,132 pounds of fishery products, valued at \$1,457,460, according to data contained in Current Fishery Statistics No. 56, released by the Fish and Wildlife Service. This was an increase of 34 percent in the volume landed and 90 percent in the value received by the fishermen as compared with February 1942. However, during this period in 1942, a large portion of the Boston otter-trawl fleet was tied up due to a dispute over war risk insurance. Considering the February 1943 landings by ports, 9,084,192 pounds, valued at \$1,048,428 were landed at Boston; 5,099,104 pounds, valued at \$340,834, at Gloucester; and 1,256,836 pounds, valued at \$68,198, at Portland. Two items, haddock and rosefish, accounted for 69 percent of the total landings during the month.

During the month, 156 vessels made 447 trips to the fishing grounds compared with 185 vessels which made 413 trips during February a year ago. The over-all weighted average price per pound received by fishermen for their catch during February was 9.44 cents as compared with 9.10 cents during January 1943 and 6.63 cents during February 1942, while that for the total of the first two months of 1943 was 9.28 cents as compared with 6.10 cents during the similar period of 1942, and 3.89 cents during 1941. Items for which unusually high prices were received by fishermen were cod, 11.08 cents per pound; haddock, 12.43 cents; pollock, 11.78 cents; rosefish, 5.07 cents; and scallop meats, 61.70 cents. The weighted average price for all landings during February was more than 2½ times that received during the same month in 1941.

Stormy weather during the first half of the month kept the line trawlers and the in-shore fleet inactive, but conditions improved during the latter part of the month and some of the best weather of the winter prevailed.

Total landings at the three ports during the first two months of 1943 amounted to 29,957,862 pounds, valued at \$2,778,517, representing an increase of 11 percent in volume landed and 69 percent in value as compared with the similar period of 1942. However, the production during the first two months of 1943 was 38 percent below that of the same period of 1941 when a total of 48,490,778 pounds were landed.

Landings by Fishing Vessels at Boston and Gloucester, Mass., and Portland, Me.

Item	February 1943		January 1943		February 1942		Two months ending with--			
	Pounds	Cents*	Pounds	Cents*	Pounds	Cents*	February 1943		February 1942	
Cod	2,949,380	11.08	1,320,500	11.55	1,837,822	8.27	4,269,880	11.23	3,406,722	8.30
Haddock	5,437,239	12.43	6,463,822	10.84	3,957,699	8.69	11,901,061	11.57	9,538,492	7.89
Hake	362,975	7.96	292,017	8.74	86,235	8.59	654,992	8.31	249,030	7.48
Pollock	709,147	11.78	1,971,190	9.58	265,505	8.86	2,680,337	10.16	1,707,500	5.95
Cusk	66,538	10.12	38,995	9.86	141,890	7.19	105,533	10.02	287,247	6.99
Halibut	11,610	35.28	2,559	37.98	7,902	28.31	14,169	35.77	13,450	27.54
Mackerel	700	3.00	2,630	17.30	-	-	3,330	14.29	980	7.76
Flounders:										
Gray sole	202,466	10.13	131,243	10.65	246,035	8.45	333,709	10.33	410,765	8.53
Lemon sole	8,395	19.39	12,895	21.86	24,165	16.23	21,290	20.89	63,640	15.98
Yellowtail	126,645	9.65	190,360	7.55	130,655	7.47	317,005	8.39	635,540	5.52
Blackback	92,890	9.55	93,920	8.40	43,800	8.47	186,810	8.97	163,015	6.64
Dab	108,440	8.84	101,323	8.67	131,125	6.62	209,763	8.76	280,515	5.84
Other	120	-	445	-	1,000	-	565	-	1,000	-
Rosefish	5,183,664	5.07	3,790,102	4.74	4,658,487	3.79	8,973,766	4.93	10,077,016	3.45
Whiting	114,918	6.77	38,519	6.23	1,808	6.69	153,437	6.65	57,735	3.79
Wolffish	22,668	10.08	7,425	8.88	15,295	8.39	30,093	9.78	31,220	8.09
Scallops (meats)	7,237	61.70	31,132	52.08	3,917	37.99	38,369	53.89	10,608	37.37
Other, fresh	35,100	-	28,653	-	5,775	-	63,753	-	15,373	-
Total	15,440,132	9.44	14,517,730	9.10	11,559,115	6.63	29,957,862	9.28	26,949,848	6.10
By ports:										
Boston	9,084,192	11.54	9,938,573	10.40	7,317,504	7.60	19,022,765	10.95	18,153,122	6.89
Gloucester	5,099,104	6.68	3,389,689	6.79	3,582,765	5.13	8,488,793	6.73	7,251,153	4.67
Portland	1,256,836	5.43	1,189,468	4.77	658,846	3.99	2,446,304	5.11	1,545,573	3.61

*Weighted average of prices per pound paid to fishermen.

CATCH BY LARGE OTTER TRAWLERS DURING 1942 DROPPED 39 PERCENT UNDER 1941

Landings by fishing vessels at the ports of Boston, and Gloucester, Massachusetts and Portland, Maine, during 1942 are summarized by gear and area of capture in Current Fishery Statistics No. 51, released by the Fish and Wildlife Service. Data contained in this bulletin shows that 369 craft of 5 net tons or greater made 11,009 trips to the fishing grounds and were absent from port 41,636 days. In comparison, during 1941, 386 vessels made 12,667 trips and were absent from port 49,893 days. The total catch during 1942, after the salted fish had been converted to the basis of fresh fish as landed, amounted to 372,998,955 pounds, a decline of slightly over 100 million pounds compared with the previous year.

Medium otter trawlers delivered 147,675,967 pounds or 40 percent of the total; large otter trawlers, 113,963,209 pounds or 31 percent; small otter trawlers, 54,554,825 pounds or 15 percent; and purse seiners, 28,507,860 pounds or 8 percent. These four types of gear accounted for 94 percent of the total yield. As a result of the requisitioning of many of the large trawlers for the armed services, the catch by large otter trawls dropped from more than 185 million pounds in 1941 to 114 million in 1942.

Considering the landings by fishing grounds, the fish taken on the grounds off Eastern Massachusetts and landed at the three ports amounted to 74,627,173 pounds and consisted mainly of pollock, mackerel, and whiting. The catch taken on Inner Grounds, totaled 44,334,568 pounds, of which 38,903,464 pounds were rosefish. Central and Southeast Georges Bank was third with 40,190,663 pounds consisting largely of cod and haddock. Fourth, was the Northern Edge and Northeast Peak of Georges Bank with 39,936,656 pounds also consisting mainly of cod and haddock. On these four banks were caught 53 percent of the total fish landed at the three ports.

NEW YORK SALT-WATER RECEIPTS INCREASE 36 PERCENT IN MARCH

Receipts of fresh and frozen fish and shellfish on the New York salt-water market during March were 19,022,000 pounds, an increase of 36 percent over the 13,973,000 pounds received during February, but 7 percent below the 20,350,000 pounds received in March a year ago, according to the Service's New York Market News office. Landings by fishing vessels, although considerably below those of March 1942, were 109 percent above those of the previous month and accounted for approximately 15 percent of the total receipts. Increases for the month were general for most of the more important species with the greatest percentage increase occurring in supplies of blackback flounders and whiting. Receipts of both these items also were greater than a year earlier.

Receipts of Fresh and Frozen Fishery Products--Salt-water Market, New York City*

Item	March	March compared with		February	March
	1943	February 1943	March 1942	1943	1942
Classification:	Pounds	Percent	Percent	Pounds	Pounds
Fish	13,761,000	+ 48	- 6	9,302,000	14,707,000
Shellfish, etc.	5,261,000	+ 13	- 7	4,671,000	5,643,000
Total receipts	19,022,000	+ 36	- 7	13,973,000	20,350,000
Important items:					
Cod	2,231,000	+ 63	- 7	1,365,000	2,403,000
Flounder:					
Blackback	734,000	+171	+ 65	271,000	445,000
Yellowtail	3,350,000	+ 17	- 18	2,869,000	4,090,000
Haddock	954,000	+ 42	+ 1	673,000	945,000
Mackerel	280,000	- 35	+ 20	433,000	233,000
Scup (porgy)	467,000	+ 75	+ 3	267,000	453,000
Smelt	286,000	- 6	- 61	305,000	740,000
Whiting	1,208,000	+105	+125	590,000	537,000
Clams, hard	2,084,000	+ 23	+ 4	1,698,000	2,006,000
Lobsters	284,000	+ 15	- 24	246,000	373,000
Oysters:					
Shell	1,457,000	+ 13	- 3	1,287,000	1,507,000
Shucked	211,000	+ 40	- 3	151,000	217,000
Shrimp	635,000	- 21	- 25	800,000	846,000
Arrivals by:					
Fishing vessels	2,461,000	+109	- 35	1,178,000	3,794,000
Truck, freight, and express	16,561,000	+ 29	0	12,795,000	16,556,000

*Excluding imports entered at New York City.

CHICAGO RECEIPTS IN MARCH 13 PERCENT BELOW LAST YEAR

There were 5,334,000 pounds of fresh and frozen fishery products received in the wholesale fish market in Chicago in March, 15 percent below receipts for the previous month and 13 percent under those for the same month a year earlier, according to the Service's Market News office in that city. Receipts during the first quarter were 4 percent under those for the same period last year. In the three months, trucks carried 3,999,000 pounds, 24 percent of the total and 33 percent less poundage than was shipped by this method in the same period a year ago. Rail express carried 4,364,000 pounds, 29 percent of the total and an increase of 101 percent, while rail freight was used for 7,862,000 pounds, 47 percent of the total and a decrease of 12 percent. The trend during most of the past year has been toward greater use of rail express for fish shipments going to the Chicago market but rail freight has held up fairly well due to larger shipments of frozen Canadian whitefish.

It has been reported that five new fishing crews are fishing for carp and buffalofish in the Mississippi River at La Crosse, Wisconsin, and three new firms in the same river at Genoa, Wisconsin.

Receipts of Fresh and Frozen Fishery Products at Chicago

Item	March 1943	March 1943 compared with		3 months Jan.-Mar. 1943	Compared with	
		Feb. 1943	Mar. 1942		3 months 1942	12 months 1942
Classifications:	Pounds	Percent	Percent	Pounds	Percent	Pounds
Fresh-water fish	3,688,000	+ 1	- 2	9,885,000	+ 2	35,913,000
Salt-water fish	1,303,000	- 24	- 20	4,982,000	- 9	21,913,000
Shellfish, etc.	344,000	- 61	- 53	1,859,000	- 16	10,342,000
Total receipts	5,334,000	- 15	- 13	16,725,000	- 4	68,167,000
<u>Important items:</u>						
Carp	434,000	- 10	+ 33	1,151,000	+ 66	2,594,000
Lake herring	195,000	- 3	- 15	564,000	- 20	3,568,000
Lake trout	484,000	+ 27	- 13	1,118,000	- 7	6,417,000
Sauger	220,000	- 62	- 66	1,236,000	- 48	4,057,000
Sheepshead	217,000	+ 76	+ 40	398,000	+ 20	1,808,000
Smelt	128,000	- 51	- 78	516,000	- 46	2,010,000
Whitefish	693,000	+ 20	+ 137	1,691,000	+ 78	3,411,000
Halibut	276,000	- 66	- 67	1,942,000	- 23	8,977,000
Rosefish fillets	218,000	+ 104	- 32	487,000	- 42	3,715,000
Shrimp	92,000	- 84	- 78	1,031,000	- 12	7,119,000
<u>Leading sources:</u>						
Louisiana	49,000	- 87	- 82	617,000	0	4,696,000
Massachusetts	516,000	+ 51	- 13	1,394,000	- 27	8,013,000
Wisconsin	695,000	- 4	- 31	1,745,000	- 15	8,596,000
Manitoba	1,493,000	+ 4	+ 50	3,976,000	+ 12	6,894,000
Domestic total	2,974,000	- 14	- 26	9,250,000	- 11	47,694,000
Imported total	2,360,000	- 16	+ 12	7,476,000	+ 7	20,473,000
<u>Transported by:</u>						
Truck	1,166,000	- 28	- 51	3,999,000	- 33	24,937,000
Express	1,886,000	+ 33	+ 87	4,864,000	+ 01	19,448,000
Freight	2,282,000	- 29	- 17	7,862,000	- 12	23,782,000

RECORD HIGH PRICES REPORTED FOR SHRIMP IN GULF AREA

Although the production of shrimp in the Gulf States area for the first two months of 1943 was slightly above the same period a year earlier, prices in the New Orleans French Market reached an all-time high of from \$36.00 to \$45.00 a barrel for the medium count shrimp in the week ending March 20, according to the Service's New Orleans Market News office. Soft crabs were bringing \$3.00 a dozen and most other varieties of fish and shellfish were far above any recorded price in other years. With the exception of hard crabs and fresh-cooked crab meat, the production of most other fishery products in the Gulf area during February was considerably greater than in the previous month and also higher than in February a year ago. In the Morgan City area the price paid to fishermen for shrimp stood at \$30.00 a barrel. The price last fall was \$22.00, later going to \$26.00 and then to \$28.00. Most of the Morgan City shrimp is shipped to northern markets.

In the first half of April, according to the Service's representative, some of the localities in the Gulf States have put into operation a plan to hire one responsible person to handle all matters pertaining to ration and priority forms. In this way, it is hoped to save a large number of man hours for the fishermen and thus increase production. Previously, fishermen have been forced to spend considerable fishing time contacting ration boards for fuel and food rations.

Production of Fishery Products in the Gulf States*

Production of Fishery Products in the Salt Waters								
Item	Unit	February 1943	February 1943 compared with		2 mos. Jan.-Feb. 1943	Compared with		12 months Jan.-Dec. 1942
			Jan. 1943	Feb. 1942		2 months 1942		
			Percent	Percent		Percent		
Shrimp:								
For canning	Bbls.	4,611	- 21	+ 18	10,475	- 27		187,285
Other	do	<u>10,745</u>	<u>+ 51</u>	<u>+ 267</u>	<u>17,839</u>	<u>+ 29</u>		<u>173,051</u>
Total	do	15,356	+ 19	+ 124	28,314	0		360,336
Oysters:								
For canning	do	133,184	+ 69	+ 6	211,836	- 1		567,206
Other	do	<u>39,716</u>	<u>- 5</u>	<u>+ 25</u>	<u>81,735</u>	<u>+ 18</u>		<u>244,032</u>
Total	do	172,900	+ 43	+ 10	293,571	+ 4		811,238
Hard crabs	Lbs.	116,000	+ 16	- 69	216,000	- 66		14,148,000
Crab meat, fresh-cooked	do	13,000	+ 18	- 68	24,000	- 64		1,450,000
Salt-water fish	do	601,000	+ 59	+ 28	979,000	+ 2		6,039,000
Fresh-water fish	do	38,000	+ 171	+ 65	52,000	+ 21		521,000

*Includes production in Alabama, Mississippi, Louisiana, and Texas.

SEATTLE RECEIPTS IN FEBRUARY DROP 34 PERCENT

Receipts of fresh and frozen fishery products at Seattle in February totaled 2,707,000 pounds, a decline of 34 percent below the previous month and 7 percent under the same month a year earlier, according to the Service's Market News office in that city. The large drop in January receipts was caused by the difference in importations of halibut, as most of the other species increased in the second month of the year. Soupin shark, totaling 600,000 pounds, was the top item in poundage for the first month since its utilization as a food fish.

Receipts of Fresh and Frozen Fishery Products at Seattle*

Item	February 1943	February 1943 compared with		2 months Jan. - Feb. 1943	2 months 1943 compared with		12 months 1942
		Jan. 1943--	Feb. 1942		2 months 1942		
Classification	Pounds	Percent	Percent	Pounds	Percent		Pounds
Total fish and shellfish	2,707,000	- 34	- 7	6,801,000	+ 19		70,997,000
Important Items:							
Flounders	147,000	+ 32	- 53	258,000	- 41		7,712,000
"Lingcod"	401,000	+ 129	- 22	573,000	- 6		5,766,000
Rockfishes	212,000	+ 57	+ 15	347,000	+ 65		1,799,000
Sablefish	150,000	- 54	- 11	474,000	+ 108		4,307,000
Shark, soupin	600,000	+ 121	-	871,000	-		172,000
Smelt, eulachon	168,000	+ 1767	+ 1020	177,000	+ 883		37,000
Crabs, hard	79,000	+ 10	- 49	152,000	- 55		1,334,000
Oysters, Pacific, shucked	144,000	+ 23	+ 4	261,000	- 3		1,158,000

*Halibut fleet and receipts from local and all other sources.

FRESH FISH PRICE CEILINGS PREDICTED BY OPA HEAD

In line with the President's mandate that immediate steps be taken "to place ceilings on all commodities affecting the cost of living", Price Administrator Prentiss M. Brown announced on April 9 that regulations are being prepared to bring under control the prices of 7 groups of products including fresh fish. The Brown statement was made before the Patman Small Business Committee.

Frozen Fish Trade

MARCH 1 STOCKS OF FROZEN FISH 30 PERCENT BELOW PREVIOUS MONTH

Holdings of fishery products continued their seasonal decline during February, according to information published in Current Fishery Statistics No. 56 by the Fish and Wildlife Service. Stocks of frozen fish decreased from 74,949,000 pounds on February 1, to 52,831,000 pounds on March 1, a decline of 30 percent. All important items showed marked seasonal declines.

Because of the change in the date for reporting stocks of frozen fishery products from the 15th of the month to the first of the month, it is not possible to make an exact comparison of the March 1 stocks with those of the same date last year. However, it is estimated that the stocks on March 1, 1943, were about 20 million pounds less than those held on this date in 1942. Of the more important items, the only ones which appear to be held in either equal or greater quantities than a year ago were mackerel, mullet, sablefish, whiting, sea trout, sea herring, scup, shad, and whitefish.

Although holdings dropped in all sections of the country, the most marked decreases occurred in the New England section which experienced a decline of 44 percent, the South Atlantic with a decline of 36 percent, and the Middle Atlantic with a decline of 32 percent.

Holdings of Fishery Products in the United States

Item	March 1, 1943 Pounds	March 1 compared with			February 1, 1943 Pounds	March 15, 1942 Pounds	5-yr. average March 15 Pounds
		Feb. 1, 1943 Percent	Mar. 15, 1942 Percent	5-yr. av. Mar. 15 Percent			
Frozen fish and shellfish:							
Total holdings	52,831,000	-30	- 15	+ 8	74,949,000	62,160,000	48,734,000
<u>Important Items:</u>							
Fillets:							
Cod	1,087,000	-35	- 11	- 5	1,660,000	1,215,000	1,149,000
Haddock	2,391,000	-33	- 29	- 4	3,585,000	3,384,000	2,478,000
Rosefish	1,280,000	-10	- 59	- 31	1,417,000	3,138,000	1,845,000
Halibut	4,119,000	-27	- 21	+ 42	5,646,000	5,217,000	2,895,000
Mackerel	4,261,000	-34	+115	+ 98	6,473,000	1,986,000	2,150,000
Mullet	1,857,000	-33	+148	*	2,783,000	750,000	*
Sablefish	1,553,000	-36	+ 22	+ 16	2,417,000	1,272,000	1,337,000
Salmon	3,617,000	-41	- 32	- 18	6,079,000	5,357,000	4,434,000
Whiting	6,711,000	-34	+137	+112	10,232,000	2,831,000	3,172,000
Blue pike and sauger	1,059,000	-10	- 23	- 9	1,181,000	1,378,000	1,160,000
Lake herring	1,204,000	-36	- 30	- 8	1,892,000	1,731,000	1,307,000
Whitefish	1,469,000	+ 3	*	- 16	1,421,000	1,465,000	1,754,000
Shrimp	3,514,000	-20	- 49	**	4,417,000	6,859,000	**
<u>Cured Fish:</u>							
Herring, cured	7,556,000	+30	- 34	- 44	5,814,000	11,534,000	13,445,000
Salmon, mild-cured	4,024,000	-19	- 12	- 2	4,995,000	4,590,000	4,108,000

*An increase of less than one-half per cent.

**Data not available.

FEBRUARY FREEZINGS OF COD, HADDOCK AND ROSEFISH FILLETS LESS THAN YEAR AGO

Freezings of fishery products as reported by domestic freezers during the month of February were conducted at about a rate equal to that of the previous month and February a year ago. During February, 6,789,000 pounds of fish and shellfish were frozen, according to information published in Current Fishery Statistics No. 56 by the Fish and Wildlife Service. The principal items frozen during the month were rosefish fillets, shrimp, smelt, and whiting.

While it is not possible to make exact comparisons with a year ago due to the change in the date for reporting cold storage statistics from the 15th to the first of the month, shrimp, and fillets of rosefish, cod, and haddock appear to have been frozen in considerably smaller volume than last year. Important increases were evident, however, in the freezings of flounders, smelt, whiting, and whitefish.

Freezings of Fishery Products in the United States Cold Storage Plants
(Figures are for the month ending on the date indicated)

Item	March 1, 1943 Pounds	March 1 compared with			February 1, 1943 Pounds	March 15, 1942 Pounds	5-yr. average March 15 Pounds
		Feb. 1, 1943 Percent	Mar. 15, 1942 Percent	5-yr. av. Mar. 15 Percent			
Total fish and shellfish:	6,789,000	+ 1	- 2	+ 19	6,740,000	6,940,000	5,706,000
<u>Important Items:</u>							
Fillets:							
Cod	155,000	+135	- 46	- 30	66,000	288,000	222,000
Haddock	173,000	- 71	- 77	- 81	593,000	759,000	911,000
Rosefish	1,124,000	+ 52	- 47	- 10	739,000	2,103,000	1,250,000
Flounders	190,000	+ 52	+387	+322	125,000	39,000	45,000
Smelt	397,000	+108	+ 14	+145	191,000	347,000	162,000
Whiting	392,000	- 14	+308	+270	458,000	96,000	106,000
Whitefish	209,000	+ 4	+ 43	+ 18	201,000	146,000	177,000
Shrimp	419,000	- 14	- 9	*	487,000	460,000	*

*Data not available.

BOSTON COLD-STORAGE HOLDINGS DROP TO RECORD LOW AT END OF MARCH

Holdings of frozen fishery products in Boston cold-storage warehouses, amounting to 2,047,000 pounds on March 31, were at a record low for recent years, according to information furnished by the Service's Boston Fishery Market News office. Stocks were 55 percent below the last Wednesday in February, and 69 percent under the comparable date in March one year

ago. A study of cold-storage holdings for the previous four years indicates that the current holdings at the end of March were less than half those for similar dates in 1939 through 1942.

Stocks of frozen whiting in 15 cold-storage warehouses in Maine and Massachusetts on March 27 totaled 1,003,000 pounds, a drop of 20 percent from four weeks earlier and 19 percent below a year ago. The total was made up of 73 percent round whiting, 26 percent dressed, H & G, fillets, and skuljoes, and approximately 1 percent animal food.

Boston Cold-storage Holdings					
Item	March 31, 1943	March 31 compared with		February 24, 1943	March 25, 1942
	Pounds	Percent	Percent	Pounds	Pounds
Total fish and shellfish	2,047,000	- 55	-69	4,541,000	6,516,000
<u>Important Items:</u>					
Fillets:					
Cod	71,000	- 31	-81	103,000	370,000
Haddock	141,000	- 33	-86	210,000	1,041,000
Follock	37,000	- 84	-94	228,000	595,000
Rossfish	78,000	- 24	-85	103,000	527,000
Halibut	119,000	+ 29	-27	92,000	163,000
Herring, sea	155,000	- 44	-29	276,000	217,000
Mackerel	461,000	- 75	-24	1,828,000	603,000
Smelt	189,000	+ 350	-84	42,000	1,167,000
Swordfish, native	21,000	- 71	-79	72,000	102,000
Shrimp	118,000	- 50	-74	237,000	458,000

NEW YORK COLD-STORAGE HOLDINGS CONTINUE TO DECLINE SHARPLY

On March 25, holdings of frozen fishery products in New York cold-storage warehouses totaled 3,527,000 pounds, approximately 42 percent under those of February 25, and 50 percent below those of a year earlier, according to the Service's New York Fishery Market News office. Holdings of practically all of the important items fell below the previous month and with the exception of mackerel, sablefish and whiting, the same was true in a comparison with stocks held on March 26, 1942. The shortage of meat reported in New York, coupled with the Lenten demand for fish and the decline in landings in this area were probably responsible for the unusually large withdrawals from cold-storage.

New York Cold-storage Holdings					
Item	March 25, 1943	March 25 compared with		February 25, 1943	March 26, 1942
	Pounds	Percent	Percent	Pounds	Pounds
Total fish and shellfish	3,527,000	-42	-50	6,100,000	7,125,000
<u>Important items:</u>					
Butterfish	197,000	-31	-55	287,000	435,000
Halibut	33,000	-21	-95	42,000	622,000
Mackerel	376,000	-57	+45	878,000	259,000
Sablefish	365,000	-32	+92	535,000	190,000
Salmon:					
King (chinook)	20,000	-82	-96	110,000	486,000
Silver	32,000	-45	-88	58,000	270,000
Smelt	79,000	-60	-79	198,000	381,000
Whiting	71,000	-68	+ 4	223,000	68,000
Whitefish	629,000	- 9	- 4	691,000	656,000
Lobster tails, spiny	83,000	- 1	-76	84,000	347,000
Shrimp	315,000	-59	-63	765,000	846,000

LARGE WITHDRAWALS DECREASE CHICAGO COLD-STORAGE HOLDINGS

Large withdrawals of frozen fish and shellfish from cold-storage warehouses in Chicago during March brought the total stocks down to 3,415,000 pounds on March 25, a decline of 36 percent from the 5,349,000 pounds held four weeks earlier and 48 percent below a year ago, according to the Service's Fishery Market News office in that city. The usual decrease during March was accelerated by Lenten needs and the demand for protein foods. The only large increase over the previous month was in the stocks of whitefish which went up 102 percent, due to much heavier receipts of this species from the Canadian Provinces.

Chicago Cold-storage Holdings

Item	March 25, 1943	March 25 compared with		February 25, 1943	March 26, 1942
	Pounds	Feb. 25, 1943	Mar. 26, 1942	Pounds	Pounds
Total fish and shellfish	3,415,000	- 36	-48	5,349,000	6,571,000
<u>Important items:</u>					
Blue pike and sauger	370,000	- 40	-49	619,000	727,000
Lake herring	140,000	- 49	-71	274,000	481,000
Lake trout	200,000	- 6	-12	212,000	227,000
Tullibee	94,000	- 29	-67	132,000	286,000
Whitefish	356,000	+102	-26	176,000	483,000
<u>Filletts:</u>					
Haddock	77,000	- 25	-38	103,000	124,000
Rosefish	136,000	+ 14	-17	119,000	164,000
Halibut	331,000	- 53	-68	707,000	1,027,000
Salmon, silver	65,000	- 62	-54	170,000	140,000
Whiting	397,000	- 42	+86	682,000	213,000
Shrimp	254,000	- 54	-69	553,000	824,000
Spiny lobster tails	118,000	- 8	-29	128,000	167,000

CANADIAN COLD-STORAGE HOLDINGS DROP 20 PERCENT DURING MARCH

Stocks of frozen fresh fish in Canadian cold-storage plants on April 1 amounted to 13,721,000 pounds, a decrease of 20 percent as compared with holdings on March 1 and 14 percent compared with April 1 a year ago, according to data furnished by the Dominion Bureau of Statistics. The principal items in storage on April 1 were sea herring and halibut. These two species accounted for 49 percent of the total Canadian holdings. Important items which showed increases when compared with a year ago were cod, halibut, mackerel, and whitefish, while decreases were shown in salmon, sea herring, and tullibee stocks.

Canadian Cold-storage Holdings

Item	April 1, 1943	April 1 compared with		March 1, 1943	April 1, 1942
	Pounds	Mar. 1, 1943	Apr. 1, 1942	Pounds	Pounds
<u>Frozen fresh fish</u>					
Total holdings	13,721,000	-20	- 14	17,082,000	16,016,000
<u>Important items:</u>					
<u>Cod:</u>					
Whole	890,000	+12	+126	797,000	394,000
Filletts	715,000	- 2	+ 4	732,000	689,000
Salmon	1,590,000	-50	- 34	3,187,000	2,397,000
Sea herring	4,465,000	+13	- 24	3,937,000	5,870,000
Halibut	2,287,000	-39	+201	3,729,000	750,000
Mackerel	493,000	-39	+201	803,000	164,000
Whitefish	740,000	+58	+ 25	468,000	593,000
Tullibee	282,000	-47	- 67	537,000	850,000
<u>Frozen smoked fish</u>					
Total holdings	858,000	-19	+ 12	1,062,000	766,000
<u>Important items:</u>					
Finnan haddie	79,000	-45	- 55	144,000	176,000
Filletts; cod, haddock, etc.	455,000	+ 6	+ 70	431,000	268,000
Sea herring kippers	274,000	-32	-	403,000	274,000

CANADIAN FREEZINGS INCREASE MORE THAN 50 PERCENT IN MARCH

Freezings of fresh fishery products in Canada during March showed large increases over both the previous month and for March a year ago, according to preliminary data furnished by the Dominion Bureau of Statistics. A total of 3,794,000 pounds of fresh fish and 1,096,000 pounds of smoked fish were frozen during the month. The principal items frozen were fresh sea herring and cod filletts, and smoked filletts of groundfish.

Freezings of Fishery Products in Canadian Cold-storage Plants

Item	March 1943	March compared with		February 1943	March 1942
	Pounds	Percent	Percent	Pounds	Pounds
Frozen fresh fish					
Total freezings	3,794,000	+ 59	+ 51	2,387,000	2,514,000
Important items:					
Cod:					
Whole	261,000	+139	+ 73	109,000	151,000
Fillets	830,000	+ 56	- 20	531,000	1,032,000
Haddock:					
Whole	81,000	+ 37	+326	59,000	19,000
Fillets	255,000	+ 40	- 29	182,000	358,000
Sea herring	1,582,000	+116	+131	733,000	686,000
Frozen smoked fish					
Total freezings	1,096,000	+ 39	+ 34	785,000	818,000
Important items:					
Fillets; cod, haddock, etc.	886,000	+100	+ 67	444,000	530,000
Finnan haddie	57,000	- 68	- 74	176,000	223,000
Sea herring kippers	153,000	- 3	+173	158,000	56,000

Canned Fish Trade

CALIFORNIA PACK OF TUNA AND MACKEREL ABOVE THAT OF A YEAR AGO

California cannery packed 57,808 standard cases of tuna and 24,301 standard cases of mackerel during February 1943, according to information released by the California Division of Fish and Game. Compared with the same month a year ago, this was an increase of 47,661 cases in the production of canned tuna and 7,521 cases in the pack of mackerel.

The total pack of tuna during the first two months of 1943 was 10 percent above that of the similar period of 1942, while the mackerel pack showed an increase of 14 percent. The total production of tuna during the two-month period of 1943 was 83,393 cases, and mackerel, 87,712 cases.

California Pack of Tuna and Mackerel--Standard Cases^{1/}

Item	February 1943	January 1943	February 1942	Two months ending with February	
	Cases	Cases	Cases	1943	1942
Tuna:					
Albacore	10	2,842	-	2,852	312
Bonito	721	1,972	1,503	2,693	3,311
Striped	13,665	1,593	1,269	15,258	6,375
Yellowfin	36,453	18,221	6,193	54,674	56,865
Yellowtail	4	-	958	4	958
Flakes	6,955	957	224	7,912	7,106
Total	57,808	25,585	10,147	83,393	75,527
Mackerel	24,301	63,411	16,780	87,712	77,090

^{1/} Standard cases of tuna represent cases of 48 7-ounce cans, while those of mackerel represent cases of 48 1-pound cans.

CALIFORNIA SARDINE OIL AND MEAL PRODUCTION ABOVE PREVIOUS SEASON

During the season August 1, 1942 through March 1, 1943, the total production of sardine or pilchard oil in California amounted to 13,145,084 gallons and the production of meal was 76,895 tons, according to information furnished by the California Sardine Products Institute and the State Division of Fish and Game. This was an increase of 6 percent in oil and 8 percent in meal over the 1941-42 production. Although total landings were lower than the previous season, allocation difficulties and a shortage of cannery labor caused a reduction in the sardine pack and an increased production of meal and oil.

PACK OF SHRIMP IN GULF STATES DOWN 8 PERCENT ON MARCH 27

The current season's shrimp pack in the Gulf area to March 27 was 8 percent below that for the same period one year earlier and 29 percent below the five-year average, according to the Service's New Orleans Fishery Market News office. This season 39 canneries operating under the Seafood Inspection Service of the U. S. Food and Drug Administration have packed 558,461 standard cases, utilizing approximately 37,452,000 pounds of raw shrimp from July 1 to March 27. In the four-week period, February 28 to March 27, 1943, there were 1,441 standard cases packed, 18 percent below the 1,765 cases packed during a similar period a year earlier. Unusually high prices being paid for fresh shrimp have diverted a higher than normal percentage from the canneries.

Wet and Dry Pack Shrimp in all Sizes in Tin and Glass--Standard Cases*

M O N T H			S E A S O N		5-yr. average
1943	1943	1942	1942-43	1941-42	
Feb. 28-Mar. 27	Jan. 31-Feb. 27	Mar. 1 - 28	July 1 - Mar. 27	July 1-Mar. 28	July 1-Mar. 27
1,441	16,025	1,765	558,461	609,945	789,851

*All figures on basis of new standard case - 48 No. 1 cans with 7 oz. per can in the wet pack and $6\frac{1}{2}$ oz. per can in the dry pack.

Quotations for canned shrimp in the usual wholesale quantities in plain No. 1 standard tins, f.o.b. point of production, were reported by Gulf Coast packers as follows:

Canned Shrimp Prices--Per Dozen Tins

Item	April 1, 1943*	April 1, 1942**	Item	April 1, 1943*	April 1, 1942**
WET PACK			DRY PACK		
Broken	\$2.45	***	Broken	\$2.55	***
Small	2.70	\$1.90-2.20	Small	2.80	\$1.90-2.15
Medium	2.80	2.00-2.30	Medium	2.90	2.00-2.25
Large	2.95	2.10-2.40	Large	3.05	2.10-2.35
Jumbo	3.05	2.20-2.60	Jumbo	3.15	2.20-2.50

*7 oz. net wt. for wet pack and $6\frac{1}{2}$ oz. net wt. for dry pack.

**5-3/4 oz. net wt. for wet pack and 5 oz. net wt. for dry pack.

***Not available.

Note:--April 1, 1943 prices are maximum prices leveled off by CFA in MPR 311. This regulation became effective February 2, 1943.

PRELIMINARY STATEMENT OF CANNED OYSTER PACK IN 1942

Total production of the pack of canned oysters in 1942 in the United States amounted to 488,378 standard cases of 48 five-ounce cans, valued at \$3,599,703, according to Current Fishery Statistics No. 59 recently released by the Fish and Wildlife Service. This represents a decrease of 18 percent in quantity but an increase of 25 percent in value as compared to the previous year's total.

By States, Mississippi led all others with a pack of 165,987 standard cases, valued at \$1,266,169. Louisiana ranked second, with a production of 131,371 standard cases, valued at \$996,187.

In addition to the regular pack there were 802 standard cases of smoked oysters, valued at \$25,173, which were produced in Washington and Louisiana.

NEW CANNED FISHERY PRODUCTS PERMITTED

The number and quantities of food products which can be packed in cans during 1943 are increased by Conservation Order M-81, as amended April 27 by the War Production Board.

The amended order, which was issued at the request of the War Food Administration, provides:

1. Thirteen additional food products added to the list of foods which may be packed in cans. Two are fishery products.

Product	Packing Quota	Can Sizes	Can materials	
			Body	Ends
35. Soups: Limited to fish of the kinds listed in Sched- ules I and II.				
b. Non-seasonal soups: Clam or fish chowders, turtle...8% dry solids	75% of total 1942 pack of specified non-sea- sonal soups.	1 picnic	1.25 tin ..	1.25 tin*
46. Ground fish, containing no filler and packed for human consumption only.	Unlimited	300 (300 x 407) ..	1.25 tin* .	1.25 tin*
63. Turtle	Unlimited	300 (300 x 407) ..	1.25 tin* .	1.25 tin*

Note:--All persons manufacturing cans shall, to the greatest extent available, use 0.50 tinplate wherever the single asterisk appears. All persons using cans marked with the asterisk, are hereby required to accept from the manufacturer making delivery, to the greatest extent available, cans made as specified of 0.50 tinplate wherever the single asterisk appears.

2. Quota-free use of certain sizes of open-top sanitary cans now in the hands of can manufacturers or packers, for packing any food products permitted by the order.

3. Quota-free use of certain sizes of open-top sanitary cans made from frozen tinplate now in the hands of can manufacturers.

Order M-81, as amended on December 9, 1942, specified certain can sizes for each food product. Cans already manufactured in other sizes, or in process of being manufactured in other sizes, could be used up in packing permitted products, if charged to the packer's quota. However, packers have been hesitant to use such cans on that basis.

Frozen tinplate is any tinplate which, on December 9, was not, because of size, gauge, or other reasons, suitable for the manufacture of cans which could be used for packing products under M-81.

The action is designed to facilitate consumption of these stocks of cans and tinplate, and to help obtain a maximum food pack during 1943.

A packer is eligible to use the cans only under the following conditions:

1. Manufacture: (a) Cans must have been manufactured prior to December 9, or produced from parts in conformity with technical details outlined in the text of the amended order.

(b) Cans must not be of the specific sizes listed for open-top sanitary cans in schedules I and II attached to the order.

2. Use: (a) Cans may be used only for food products listed on schedules I and II, including the 13 added by the order.

(b) Cans may not be used for any products until the packer has packed and set aside the full amount of any given product which he is required to set aside for the armed forces, Lend-Lease, or other Government agencies under Food Distribution Order No. 22 and its supplementary orders.

WEEKLY REPORTS ON FISH PACK REQUIRED BY WFA

Packers of fish and shellfish subject to Food Distribution Order No. 44, are required to file weekly pack reports during their respective 1943 packing seasons, the War Food Administration announced May 5. Under the Director's Food Distribution Order No. 44.1, a pack report is required for each week after April 1 for species already being packed, while for other species weekly reporting must begin when the packing seasons start.

Canners of salmon, pilchard, Atlantic sea herring and mackerel filed such reports regularly for the 1942 pack, and will continue to do so with respect to the 1943 pack. Canners of tuna, yellowtail, bonito, shrimp, and Pacific horse mackerel--species recently placed under reservation order--commence filing similar weekly reports when their respective 1943 packing season begin.

The weekly pack reports are to be filed on Form FDO-44-1, copies of which may be obtained from regional offices of the Food Distribution Administration at San Francisco, Dallas, Atlanta, and New York.

TITLE 7 - AGRICULTURE CHAPTER XI - FOOD DISTRIBUTION ADMINISTRATION
(Director Food Distribution Order No. 44.1, Fish and Shellfish) Part 1465--Fish and Shellfish

REQUIRING THE FILING OF REPORTS IN CONNECTION WITH RESTRICTED FISH AND SHELLFISH

Pursuant to the authority vested in me by Food Distribution Order No. 44 (8 F.R. 4227), dated April 1, 1943, issued pursuant to Executive Order No. 9280, dated December 5, 1942, and to effectuate the purposes of such orders, IT IS HEREBY ORDERED, as follows:

§ 1465.21 Reports in connection with restricted fish and shellfish.

(a) Definitions. When used in this order, unless otherwise distinctly expressed or manifestly incompatible with the intent thereof: (1) The term "fish and shellfish" means fish and shellfish of the species designated in section 1465.20(b) of Food Distribution Order No. 44: Provided, That for the purpose of the reporting requirements contained in this order, Yellowfin, skipjack, and Bluefin tuna designated in Group 7 of said section shall be considered as one species. (2) The term "packing season" means the period from the time when a canner first commences to pack fish and shellfish on or after April 1, 1943, until the date that such canner ceases to pack fish and shellfish, or February 29, 1944, whichever date is the earlier.

(b) Weekly Reports. Each canner shall report to the Director on Form FDO-44-1, entitled "Canned Fish and Shellfish: Weekly Pack Report", the quantity of each species of fish or shellfish packed by him in each calendar week of his packing season. Such reports shall be submitted for each calendar week during the respective canner's packing season, and such reports shall be submitted even though no fish or shellfish may be packed by such canner during a particular week. Reports for the calendar weeks, or parts of calendar weeks, prior to the effective date hereof shall be submitted as aforesaid on or before May 8, 1943. Reports for the calendar weeks or parts of calendar weeks subsequent to the effective date hereof shall be submitted as aforesaid within four days after the last day of each such calendar week.

(c) Seasonal Reports. In addition to the weekly reports described in (b) hereof, each canner shall report on Form FDO-44-1 the total quantity of each species of fish and shellfish, respectively, which were packed by him during his packing season, and submit such report to the Director within 15 days after the termination of such packing season.

(d) Completion of Reports. All reports submitted to the Director pursuant to (b) and (c) hereof shall be completed pursuant to the instructions contained on Form FDO-44-1. The reporting requirements of this order have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942.

(e) This order shall take effect on May 6, 1943. (E.O. 9280, 7 F.R. 10179; FDO No. 44, 8 F.R. 4227.) Issued this 4th day of May 1943.

/s/ Roy F. Hendrickson
Director of Food Distribution.

POINT VALUES FOR CANNED FISH COMMODITIES REDUCED

Twenty-five reductions and sixteen advances, each representing a change of one point, effective at 12:01 a.m. Sunday, May 2, are shown in the new Table of Consumer Point Values for Meats, Fats, Fish, and Cheese announced April 30 by the Office of Price Administration.

Advances are confined largely to prime cuts--steaks and roasts--of beef, veal and pork. Reductions occur for the most part in variety meats, canned fish, and other special products already having a relatively low point value.

Recognition was given to a new American industry, with the listing of canned sea mussels at one point a pound. In the initial table of consumer point values, effective on March 29,

sea mussels were not listed separately, but carried under "all other" canned fish items at 7 points a pound. The point value of this general "all other" classification was reduced from 7 to 3 points a pound.

Another change places caviar and fish roe in the "all other" category under canned fish, and thus reduces their point value per pound from 7 to 3. These items have been moving slowly under rationing. Canned shrimp, formerly in the "all other" group, has been given a separate classification and remains valued at 7 points.

The changes in points values for processed foods, also announced by OPA on May 2, included a revision in the "Soups" list which eliminated green turtle, oyster and terrapin soups, clam juice, clam broth, and clam juice cocktail from rationing. This became effective May 2.

GLASS CONTAINER SUPPLY MAY BE GREATER

Production of glass containers in 1943 can be increased by approximately 8 percent over that in 1942, if manpower, transportation and an adequate supply of materials are available, the Glass Container Manufacturers Industry Advisory Committee said at a meeting with WPB officials in Washington. The committee added that during the first quarter of 1943 emphasis was placed on the production of food containers. As a result, production of such containers in the first quarter of 1943 was approximately 20 percent above that in the corresponding period of 1942.

Foreign Fishery Trade

CERTAIN CANADIAN FISH SHIPMENTS NEED NO EXPORT PERMIT

The Canadian Department of Trade and Commerce announced February 25, that effective on and after March 1, 1943 shipments not exceeding 1,500 pounds in any one day to the United States of fresh pickerel, whitefish, or lake trout will be exempt from requiring an export permit if shipped by licensed fishermen only. It is emphasized that the fisherman's commercial fishing license number must be shown clearly on the Export Entry Form Bl3-B in order to clear the fish through the Customs.

The Honorable James A. MacKinnon, Minister of Trade and Commerce, pointed out that this exemption does not hold for frozen fish, nor does it apply to dealers or middlemen, but only to bona fide fishermen. It will be of great assistance to legitimate fishermen, particularly along the Great Lakes, who send out regular small shipments of fresh-caught fish, a very perishable commodity, which must be moved with the least possible delay. Mr. MacKinnon stated that this will not endanger fish supplies required for Canadian use, since it applies to only a limited part of the fish trade.

The exemption is contained in Amendment No. 19 to the Fourth Revision of the Export Permit Regulations of September 30, 1943.

CANADIAN IMPORTS 14.5 PERCENT OF FILLETS QUOTA

Up to April 3, according to preliminary figures from the U. S. Treasury Department, Canada had used 14.5 percent (2,179,054 lbs.) of its 15,000,000-pound quota of fresh and frozen fillets (cod, haddock, hake, pollock, cusk, and rosefish) permitted to be imported into this country under the provisions of the Canada-U. S. Trade Agreement signed November 17, 1938.

CONTROL OF EXPORTS FROM CANADA

By Order in Council P.C. 2862, effective April 15, 1943, these commodities are added to the list of those whose exportation is prohibited except under permit from the Export Permit Branch, Department of Trade and Commerce, Ottawa, according to the April 24 issue of the Commercial Intelligence Journal.

Group 2: Animals and Animal Products--

Cod, dried, salted or pickled.
Cusk, dried, salted or pickled.
Haddock, dried, salted or pickled.
Hake, dried, salted or pickled.

Herrings, Atlantic, salted.
Pollock, dried, salted or pickled.
Mackerel, salted or pickled.
Fish, Atlantic, n.o.p., dried, salted or pickled.

Group 4: Wood, Wood Products and Paper--

Cooperage stock: Barrel headings, hoops and staves, in the rough or manufactured.

By Export Permit Branch Order No. 69, also effective April 15, 1943, exemptions on the following are cancelled, and they now require an export permit before being shipped to any destination:

Herring, Atlantic, pickled, of a grade or quality known as "tropics",
Herring, Atlantic, bloaters.

SHARK LIVER OIL PRODUCTION DEVELOPING IN BRAZIL

Since the outbreak of the war, cod liver oil has become increasingly scarce in São Paulo, according to the American Consulate General in São Paulo, Brazil, March 27, 1943. When the shortage of cod liver oil became acute, local fishermen, by crude methods, began extracting shark liver oil. This oil has a high vitamin content and is being used satisfactorily for livestock feed, but is not pure enough for human consumption. Some pharmaceutical laboratories began extracting the oil in an attempt to produce a pure product, and in order to improve the quality of the oil, the São Paulo State Government established a small mill in Santos for extracting shark liver oil. It also has an educational program among fishermen to acquaint them with the better methods of extracting oil from the livers.

The amount of oil obtained from shark liver varies with the species of shark, sex, season and spawning period. It varies from 35 to 58 percent of the gross weight of the liver. The liver amounts to 15 to 20 percent of the weight of the fish, and the amount of vitamin A varies inversely with the amount of oil obtained. During the early part of the shark-fishing season, the amount of oil varies from 35 to 40 percent of the liver. The vitamin A amounts to about 35,000 international units per gram. During the spawning period, the oil in female shark livers amounts to 55 to 58 percent of the weight of the liver, but the vitamin content is less than 12,000 units per gram.

The Santos shark oil mill began operation on January 28, 1943, and although it began operating during that part of the season when the vitamin content of the oil is lowest, it was possible to maintain an average of 12,000 international units per gram.

The livers are received in tubs in a brine solution. They are cut into small pieces and ground into paste. The paste is put in an extracting machine where it is held for 30 minutes under steam pressure of ten pounds and at a temperature of 80 degrees C. Then the pressure is raised to fifteen pounds and the temperature to 90 degrees for 10 minutes. At the end of this time, the paste has settled to the bottom and the oil is drawn off. By means of centrifugal force the impurities are removed from the oil. The oil is put in dark glass containers and sent to São Paulo where it is filtered through wool fabric to remove stearine. The oil is then blended so that an average of at least 12,000 units per gram of vitamin A is maintained.

The shark oil mill is located on the premises of the Industrial Fishing School in Santos and is operated by technicians of the Industrialization Section of the Department of Animal Production of the State Secretary of Agriculture.

Sharks are caught along the coastline of the states of São Paulo and Paraná, in greatest abundance near Cananea. No attempt has been made to catch them in open water because the available boats are too small to operate safely in rough weather. The shark fishing season is from September to April. Male sharks are more abundant in September and October while

female sharks are caught in large numbers in February, during the spawning season. The months of heaviest catch are from December to March. The fishermen use motor launches and usually stay out about six days. The fish are caught with nets, hooks, and trawlers. After the liver is removed, the gall is taken from it and the livers are packed in ice or salt.

On March 4, 1943, 2,120 fishermen with 67 boats had registered with the Serviço de Caça e Pesca in Santos. The fishermen have organized ten cooperatives under the direction of the Secretary of Agriculture and have set up a central cooperative in Santos.

On March 15, officials of the State Secretary of Agriculture said the price of shark liver oil was Cr.\$25 per kilo for the oil with 12,000 units of vitamins per gram. The cost of producing the oil is estimated to be between Cr.\$9.00 and Cr.\$10.00 per kilo. Imported cod liver oil delivered to Santos in 1940 cost Cr.\$8.84 per kilo. The cost of shark liver oil production can probably be reduced as markets are developed for other shark products. At present hard dried meat is selling for Cr.\$10.00 to Cr.\$12.00 per kilo, flour for feed and fertilizer for Cr.\$1.00 to Cr.\$1.20 per kilo, and stearine for Cr.\$10.00 per kilo. The price could probably also be reduced if the production per day were increased. (Cruzeiro -- official 16.50 per dollar, free market 19.63 and special free market 20.50 (Feb. 27)).

SHARK LIVER OIL INDUSTRY IN THE MADRAS PRESIDENCY*

EARLY HISTORY OF SHARK LIVER OIL INDUSTRY: When the question of shark liver oil manufacture was taken up by the Government of Madras, it was thought that this constituted an entirely new development, but it has been found that a shark liver oil industry existed in the Madras Presidency 80 years ago, long before vitamins were heard of. In India, where vitamin A deficiency is said to be widespread, the medicinal value of shark and saw fish oil has been recognized for a century. A "Report on the Sea Fish and Fisheries of India and Burma" by Surgeon-Major Francis Day, Inspector-General of Fisheries, published in 1873, states that in the sixties of the last century, medicinal oil obtained from the shark and saw fish was produced, apparently for use in India itself. For some years, about 5,000 pounds of shark and saw fish oil per annum were manufactured and the main center of production was Calicut where the manufacture was initiated in 1854, the process being under the supervision of the Civil Surgeon of Malabar. About 1870, the cost of imported cod liver oil fell below that of Indian fish liver oils and apparently the Indian industry languished because it could not compete. In those days, the industry must have been carried on at Calicut on somewhat primitive lines. It is interesting to note that the present shark liver oil industry has been established in this same town of Calicut, with all the advantages of modern scientific methods.

INTRODUCTION: The question of the production and supply of shark liver oil assumed considerable importance during the early part of 1940 since, as a result of the war, cod liver oil, which had hitherto been used generally in India for the treatment of vitamin A deficiency, became virtually unprocureable. In the previous year or two, the Fisheries Department to the Government of Madras had collected samples of oil from different species of shark, and when these were assayed, it was found that shark liver oil contained on the average about 10,000 international units of vitamin A per gram.

In July 1940, the Director-General, Indian Medical Service, visited Madras and stressed the urgency of developing the commercial manufacture of shark liver oil as a substitute for cod liver oil in order to meet the army and medical requirements. The production of shark liver oil on a commercial scale was started in October 1940, in the Government-owned Kerala Soap Institute at Calicut, South India. Owing to the expansion of this industry, the erection of a new factory exclusively for the manufacture of shark liver oil and allied products was taken in hand by the Madras Government in 1941, and the Government Oil Factory at Calicut was completed in 1942 where the oil is now being manufactured.

METHOD OF COLLECTION OF SHARK LIVERS: For the purpose of collecting shark livers there are 30 fishing villages from slightly north of Cape Comorin up to Vizagapatam on the east coast and 44 fishing villages from south of Malabar up to the northernmost border of South Kanara on the west coast. Generally speaking, the fishermen did not formerly go out to sea specially to catch sharks since there was no special inducement for them to do so. They had, therefore, to be encouraged to catch sharks in quantity by offering a good price for all the oily livers they brought into the fish-curing yards. The fishermen on the west

* Excerpts from a report prepared by the American Consulate, Madras, India.

coast were landing sharks intermittently, firstly for their fins, secondly for their flesh and lastly for their livers. This order of economic importance was reversed when it became known that the fish-curing yards would take over at a reasonable price all the livers that the fishermen could supply.

Intensive propaganda had to be undertaken to disseminate amongst the fishermen information in regard to the demand which now exists for shark livers and every possible official and non-official agency was employed for that purpose. The livers are brought by the fishermen into the nearest fish-curing yards on the west and east coasts. Fishermen are independent at present and they are paid from 1 anna to 3 annas (2 cents to 6 cents) per pound of liver. Livers which are less than 3 feet in length are not selected because it is said that these do not give good oil. In each fishing village, livers are purchased at the fish-curing yard by the Government peon, or petty officer or by the Inspector of Fisheries. Livers are also collected at a number of oil extraction centers opened exclusively for this work in coastal areas not served by fish-curing yards.

EXTRACTION OF OIL FROM LIVERS: Both on the east and west coasts, extraction of oil from livers is done by the above-mentioned members of the Fisheries Department in each village. A clean shallow vessel with a wide mouth is used for extracting oil. Kerosene oil tins may also be used. The livers are washed free from blood, and cut into small pieces. These are then put into the vessel, and sufficient cold water added. The vessel is put on a slow and steady fire while the contents of the vessel are kept agitated with a wooden ladle. When the mass has boiled vigorously for about 20 minutes, the oil which rises to the top is skimmed off into a second vessel which is half filled with hot water. Before beginning to ladle out the oil a small quantity of cold water is added. This is to prevent the oil already formed from being scorched. The boiling is continued till the liver is reduced to fine pulp. After all the oil has been skimmed, the oil in the second vessel is stirred and allowed to settle. When the oil has separated, the top layer of the oil is poured into a third vessel and stirred again with an equal volume of hot water. The washing is repeated till all the sediment and cloudiness of the oil disappear. The resulting clean oil which has a golden yellow color and an agreeable smell, comparable to that of cod liver oil, is the final crude oil ready to go into the factory for refining, filtering, etc.

REFINING, BLENDING, ETC.: The extracted oil is sent in one- or four-gallon kerosene tins to the Government Oil Factory at Calicut where it is purified, rectified, blended, diluted, and bottled. Samples from each fishing village are tested in the laboratory by a qualified chemist who is in charge of this vitamin assay to determine the vitamin potency. The oils are then grouped as high and low potency oils (oil containing 10,000 international units per gram and above is high potency oil and oil containing below 10,000 international units is low potency oil). The oil is then stored for some time in order to remove any sediment or water that may settle at the bottom. The oil, which is still crude, is then pumped into a filter press where the stearine is removed. Then the oil is steamed and washed to remove further impurities and odor. The oil is next put through various filtering processes. The pure oil thus obtained is very high in potency. It is, therefore, diluted with refined peanut oil to bring it down to a standard strength of 1,500 international units of vitamin A per gram. The oil thus mixed is blended after being filtered through another filter press. This is the final refined oil which is put in suitable containers such as tins, drums or one pound bottles.

MARKETING: The oil has been placed on the market under the description "Shark Liver Oil-Madras Brand" in three packings, namely 40-80 gallon drums, four gallon tins and colored bottles of 16 fluid ounces. The Government Oil Factory sells the oil directly to all Government, Local Fund and Municipal medical institutions and also to District Health Associations and Red Cross Societies. Sales to religious mission hospitals and to the public are effected through sole agents on commission, appointed for defined areas.

PRODUCTION: The following figures are for refined and blended oil ready for the market:

October 1940 to December 1940	4,326 Imperial gallons
1941 (January to December)	14,371 " "
1942 (" " ")	20,446 " "

The following production figures are for crude oil of all potencies:

	July 1940 to June 1941	July 1941 to June 1942
West Coast	28,800 lbs.	30,000 lbs.
East Coast	10,900 "	10,850 "
Total	39,700 "	40,850 "

The maximum potency of the crude oil is about 29,000 international units and it is brought down to 1,500 international units of vitamin A.

EXPORTS: There have been no exports of shark liver oil to foreign countries up to the present time.

It has been ascertained that the collection of livers is the maximum possible with the methods now obtaining. If facilities were afforded for deep sea fishing where big shark livers are obtainable, production would increase appreciably, but deep sea fishing is not allowed by the Government due to war conditions. Shark products such as fins and cured flesh used to be exported to Singapore and Colombo, but now that Singapore is in enemy hands and there is a dearth of shipping space to Colombo, fishermen have lost this incentive for shark fishing. The Government is inducing the fishermen to keep the collection rate at the present maximum level and to bring in more livers by:

1. Increasing the number of centers of collections,
2. Collection from local markets,
3. Advances in cash for the purchase of boats, etc.,
4. Government purchase of hooks in bulk and sale to fishermen at controlled prices, and
5. Giving increased price for livers up to 3 annas per pound (formerly the maximum price was 1 anna).

PRICES: A bottle of oil of 16 fluid ounces is sold in retail at Rs. 1-8-0 (\$0.45) in South India. This is the present ruling price. A higher price has to be paid by consumers in Northern, Eastern and Western India, depending on the cost of freight, etc. Prices are not always constant.

RESEARCH: The Government feels that the failure of the Indian fish liver oil industry to establish itself some 70 or 80 years ago has its lessons for today, namely, that every possible effort must be made in the time available to reduce the cost to such an extent that the oil produced at Calicut will be able to compete with imported cod liver oil after the war. This aspect of the question is being kept prominently in view and it is hoped that as a result of research work, it will be possible after a period of time to bring down the cost of the oil appreciably. Continuous research work will be carried out to the extent that commercial manufacture permits on (1) the nature of the variations in the vitamin content of shark liver oil produced from fish from various sources at different periods of the year and the underlying causes of such variations and (2) the methods of manufacture and refining of shark liver oil with a view to obtaining the maximum extraction of oil and retaining to the full the vitamin properties of the oil, while securing satisfactory marketable qualities. The high medicinal value of "Madras Brand" shark liver oil has been demonstrated to the satisfaction of local scientists and this, coupled with the continuous improvement in technical production that is taking place, is expected to go far to establish the position of Indian shark liver oil. The vitamin A present in cod liver oil gradually deteriorates when exposed to ultra-violet rays or to sunlight, especially in the presence of air or oxygen. A series of tests were carried out in order to determine the vitamin A deterioration of blended liver oil on exposure to the sun. Valuable and interesting results were obtained, from which it has been possible to decide on the most suitable color for the bottles in which the oil is supplied for retail sale. Preliminary experiments in regard to the preparation of malt extracts with liver oil were carried out, while the possibility of utilizing the by-product, stearine, in the preparation of a palatable malt extract was also subjected to preliminary examination. It is reported that malted shark liver oil will be made available to the public in the near future.

FISHERIES OF URUGUAY

Uruguay's commercial fish catch amounted to 3,184 metric tons in 1942, compared with 3,178 tons in 1941, according to Foreign Commerce Weekly (5/15/43). To these totals, Servicio Oceanográfico y de Pesca (the Government Fishing Service) contributed 1,222 metric tons and 1,286 tons, respectively. In the 5-year period 1938-42, the catch of S.O.Y.P. averaged 1,283 metric tons, and that of private fishermen averaged 2,022 metric tons.

In Uruguay, fishing is an industry of distinctly minor importance. The annual catch of some 3,305 metric tons is equivalent to about 2,400 metric tons of cleaned fish. Estimating the total population of Uruguay at 2,200,000, it can be seen that annual per capita consumption of fish is only 1.1 kilograms, or less than 2.5 pounds, whereas annual meat consumption is estimated at 55.7 kilograms, or 122.8 pounds, per person. Fish has been traditionally regarded in Uruguay as a second-rate food, whereas meat is considered a daily essential.

This limited demand for fish appears to be the principal reason why the fishing industry operates on such a small scale, for there is said to be no lack of fish in the River Plate. All types of fish are somewhat more abundant from mid-April to mid-November, but they are available in ample quantities at all times.

S.O.Y.P. operates a trawler from Montevideo and two smaller boats from Punta del Este, some 65 miles to the east. The private fishermen are located in the ports of Montevideo, Piriapolis, Paysandu, Santiago Vazquez, Nueva Palmira, and Carmelo. Montevideo fishermen, however, provide 90 percent of the private catch, with Piriapolis next in importance. Almost all the fishing from Piriapolis and Montevideo, both by the S.O.Y.P. and by private fishermen, is carried out fairly close to shore between Piriapolis and Isla de Flores, which is a few miles east of Montevideo.

In the years 1940 and 1941, 77.8 percent of the total catch consisted of corvina (croakers and white sea bass), 12.4 percent of pescadilla (sea trout or weakfish), and 1.1 percent of bagre (catfish). The other 8.7 percent was distributed among more than 40 other varieties of fish (no one of which accounted for more than 1 percent).

A factory operated by S.O.Y.P. produces fish meal and oil from fish-cleaning residues such as heads, tails, and viscera. Production in 1942 was about 137 metric tons of fish meal and 18 tons of oil.

Production of salt fish in Uruguay is negligible, S.O.Y.P., however, runs a canning plant. Four types of fish are tinned, namely, corvina, corvina negra (sea drum), pescadilla, and merluza (whiting or hake). Each of these species is prepared in three styles--with oil and with tomatoes, and pickled. The cans weigh 360 grams gross, 280 grams net, and are packed in boxes of 48 cans. Canned-fish production rose from 11,600 cans in 1939 to 190,828 cans in 1940; in 1941 and 1942 production totaled approximately 240,000 cans.

FISHERIES OF THE BAHAMAS

In a further attempt to end the unemployment of men and utilize a large number of boats formerly used in the sponge industry, according to a recent article in Foreign Commerce Weekly, General Sea Foods Bahamas, Ltd., operator of a plant for filleting fish and canning crawfish, was asked to study the possible extension of its operations to include dry salting of local fish (mostly of the snapper, grouper, and runner types) to supply Puerto Rico, the Virgin Islands, and other British West Indian islands. An inventory was made of available idle craft and an estimate drawn up of the cost of restoring them to seaworthiness.

The inventory disclosed 290 sloops and 1,300 dinghies, plus 100 craft which were believed to be available in islands that were not surveyed, which could be put into seaworthy condition at a small expenditure. A total of 15,000 potential workers, all experienced sailors and fishermen, were estimated as available.

To make this project feasible, the United States would have to grant necessary priorities and export permits for the equipment needed for the rehabilitation of the craft.

Abundant salt supply is available from large commercial salt ponds on Inagua Island, operated by a United States company, as well as from ponds located on Ragged Island, the latter community-owned and operated.

At present (April 1943), company and Government technicians are studying problems involved in the dry salting of locally-caught fish. A possible production of 1,500,000 pounds a month is contemplated.

FISHERIES OF MEXICO

The shark-fishing season off the Pacific Coast at Mazatlan and Manzanillo was at its height and flourishing as a result of substantially higher prices of vitamin products in the United States, according to a recent article in Foreign Commerce Weekly. Private fishing enterprises were recently aided by the repeal of the Federal tax of 1 peso per kilogram on sharks caught in the Pacific waters off the south and west coasts. This tax, which had been imposed in October 1942, for the purpose of protecting and assisting the Mexican Fishing Cooperative, will continue to be collected, however, on shellfish scallops, shrimp, corbina, lobster, crawfish, oysters, totoaba, abalone, clams, squid, and cabrilla.

On the Gulf Coast, increased fishing activities are reported in the area off Matamoras and to the south, owing to the arrival of numerous American fishermen, interested chiefly in edible fish, which find a ready market in southeastern Texas.

ORGANIZATIONS AND OFFICIALS CONCERNED WITH WILDLIFE PROTECTION: 1942

The Fish and Wildlife Service recently issued the forty-first edition of a directory of organizations and officials concerned with fish and wildlife conditions in the several States and Territories, the Canadian Provinces and Territories, Newfoundland, Mexico, the West Indies, Central America, and South America. Included in the directory are chiefly the organizations that are national or State-wide in character. The publication--Organizations and Officials Concerned With Wildlife Protection: 1942--is for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. - Price 10 cents.

DRAFT DEFERMENT APPEAL PROCEDURE REVISED

In most cases the board of appeal having jurisdiction over the area in which the registrant is employed is most familiar with the activity or occupation in which the registrant is engaged. With this in mind the Selective Service System has made provisions whereby appeals in occupational cases may be transferred under certain conditions.

Section 627.71 of Selective Service regulations reads as follows: "When an appeal is taken from the classification or reclassification of a registrant and when such appeal is upon the ground that the registrant should have been deferred by reason of his occupation, the appeal shall be transferred to the board of appeal having jurisdiction over the area in which the registrant is employed, provided all of the following conditions are met (but not otherwise):

- "(1) The first person to appeal from such classification or reclassification files with his appeal a written request for such transfer;
- "(2) The written request states in what respect an occupational question is involved; and,
- "(3) The written request states the name of the registrant's employer and the street address, county, and State where the registrant is employed."

PACKERS' TRIMMINGS FOR CRAB BAIT EXEMPTED FROM OPA PRICE SCHEDULE

Hide Glue Stock consists of a group of animal materials which are waste products of the meat packing, tanning, and fur-cutting industries. As a result of the demand for hide glue stock, OPA found it necessary to establish maximum prices January 13, 1942 in Revised Price Schedule No. 68. On March 24, 1942, packers' trimmings, consisting of cattle lips and snouts for crab bait, were exempted from the price provisions by Amendment No. 1, and on February 11, 1943, Amendment No. 2 revoked the provision requiring quarterly reports on sales of packers' trimmings for crab bait.

THE COVER PAGE

Peak planting season will soon be under way on the South Carolina oyster flats. Here are shown three of the batteaux adapted to ebb-tide shallows, with a fan-shaped shower of spat-encrusted shells being hurled from their sides by the planters' 12-tined forks. The lead article of this month's issue of Fishery Market News contains the complete story of this phase of oyster-farming.

WHOLESALE AND RETAIL PRICES

Led by continued sharp advances for farm products, principally fruits and vegetables and livestock and poultry, the Bureau of Labor Statistics' comprehensive index of wholesale prices in primary markets again moved up by 0.3 percent and reached a new high during the week ended March 13. At 103.2 percent of the 1926 average the all-commodity index showed a rise of more than 1 percent in the previous four weeks.

Retail costs of all foods advanced 2.8 percent in the month ending March 16, 1943, according to a delayed report released by the Bureau. This rise brought the retail food cost level to 137.4 percent of the 1935-39 average and 15.9 percent above March 17 one year ago.

Changes were made in the food index as of March 15 which will improve the future accuracy of the index but do not affect the figures for earlier months. The changes involve the inclusion of seven additional foods which are being bought in larger quantities; changes in the importance of different foods in the index because of reduced supplies; and increases in the weights given quotations from war production cities because of their population growth.

Wholesale and Retail Prices

Item	Unit	Percentage change from--		
<u>Wholesale: (1926 = 100)</u>		<u>March 13, 1943</u>	<u>Feb. 13, 1943</u>	<u>March 14, 1942</u>
All commodities	Index No.	103.2	+ 1.1	+ 6.3
Foods	do	107.0	+ 1.4	+11.7
		<u>March 1943</u>	<u>February 1943</u>	<u>March 1942</u>
Fish:				
Canned salmon, Seattle:				
Pink, No. 1, tall	\$ per dozen cans	1.970	0	- 7.0
Red, No. 1, tall	do	3.694	0	- 6.3
Cod, cured, large shore, Gloucester, Mass.	\$ per 100 pounds	11.500	0	+18.6
Herring, pickled, N. Y.	\$ per pound	12.0	+ 20.0	+20.0
Salmon, Alaska, smoked, N. Y.	do	35.0	0	0
<u>Retail: (1935-39 = 100)</u>		<u>March 16, 1943</u>	<u>Feb. 16, 1943</u>	<u>March 17, 1942</u>
All foods	Index No.	137.4	+ 2.8	+15.9
Fish:				
Fresh and canned	do	203.9	+ 5.6	+28.3
Fresh and frozen	\$ per pound	32.3	+ 8.4	+17.9
Canned salmon:				
Pink	\$ per pound can	23.1	-0.4	+7.9
Red	do	40.9	-1.2	+4.3

FISHERY TRADE INDICATORS

(Expressed in Thousands of Pounds)

Item	Month	Latest month	Same month a year ago	Previous month
FRESH FISH LANDINGS				
Boston, Mass.	February	9,079	7,318	9,939
Gloucester, Mass.	do	5,099	3,583	3,390
Portland, Maine.....	do	1,257	659	1,189
Boston, Gloucester, and Portland:				
Cod.....	do	2,944	1,838	1,320
Haddock.....	do	5,437	3,958	6,464
Pollock.....	do	709	266	1,971
Rosefish.....	do	5,184	4,658	3,790
FISH RECEIPTS, CHICAGO ^{1/}				
Salt-water fish.....	do	1,716	1,918	1,964
Fresh-water fish.....	do	3,669	2,963	2,527
Shellfish, etc.	do	882	595	633
By truck.....	do	1,615	1,787	1,217
By express.....	do	1,419	688	1,559
By freight.....	do	3,231	3,002	2,349
COLD STORAGE HOLDINGS ^{2/}				
New York, N. Y.:				
Salt-water fish.....	March	1,928	4,284	3,824
Fresh-water fish.....	do	1,054	1,415	1,217
Shellfish, etc.	do	545	1,426	1,060
Boston, Mass.:				
Salt-water fish.....	do	1,823	5,330	4,134
Fresh-water fish.....	do	9	6	19
Shellfish, etc.	do	215	616	388
Chicago, Ill.:				
Salt-water fish.....	do	1,315	2,386	2,388
Fresh-water fish.....	do	1,564	2,193	2,025
Shellfish, etc.	do	390	1,087	723
Unclassified.....	do	146	185	212
United States:				
Cod fillets.....	do	1,087	1,215	1,660
Haddock fillets.....	do	2,391	3,384	3,585
Halibut.....	do	4,119	5,217	5,646
Mackerel (except Spanish).....	do	4,261	1,986	6,473
Croakers.....	do	200	599	551
Rosefish fillets.....	do	1,280	3,138	1,417
Salmon.....	do	3,617	5,357	6,079
Whiting.....	do	6,711	2,831	10,232
Shrimp.....	do	3,514	6,859	4,417
New England, all species.....	do	7,944	9,955	14,153
Middle Atlantic, all species.....	do	12,266	14,860	17,911
South Atlantic, all species.....	do	3,661	3,076	5,702
North Central East, all species..	do	12,535	15,369	15,077
North Central West, all species..	do	3,943	3,639	5,021
South Central, all species.....	do	2,990	4,405	3,909
Pacific, all species.....	do	9,492	10,701	12,941

^{1/} Includes all arrivals as reported by express and rail terminals, and truck receipts as reported by wholesale dealers including smokers.

^{2/} Data for individual cities are as of the last Thursday of the month, except those for Boston which are for the last Wednesday of the month. Data on United States holdings by various species and by geographical areas are as of the first of the month for both the "Latest month" and "Previous month", but are as of the 15th of the month for the "Same month a year ago".

Note:--Data for the latest month are subject to revision.

